FEB 25 1954

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textile bulletin

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NON-FLUID OIL
TRADE MARK REGISTERED

BENEFITS 2 WAYS!

In your spinning operation, you need a lubricant that will positively stay in roll necks and off aprons and roll coverings. The leaders—7 out of 10 mills—use NON-FLUID OIL, a modern lubricant for top and bottom rolls and saddles that pays for itself many times over because NON-FLUID OIL lasts 3 to 5 times longer than ordinary oils.

Insist upon NON-FLUID OIL and benefit 2 ways: (1) better, trouble-free lubrication at less cost, and (2) greater production of clean, even yarn.

You will want to know more about NON-FLUID OIL. Send now for instructive Bulletin T13-TB and a free testing sample of NON-FLUID OIL.

Visit Our Booth 41-42 at A. T. M. Exhibition, Atlantic City, N. J.
April 26-30

NEW YORK & NEW JERSEY LUBRICANT CO.

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NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture.

Silhouette of Progress

You'll find the facts
in Atlantic City–
April 26-30

TEXTILE MACHINERY
AMERICAN ASSOCIATION
EXHIBITION
ATLANTIC CITY
APRIL 26-30
1954

"Retaining Leadership through Research"

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DRAPER CORPORATION

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TEXTILE MACHINERY
AMERICAN ASSOCIATION
ATLANTIC CITY APRIL 26-30 1954
EXHIBITION

See DUROWELD Products on display in our Booth - No. 71-72.

Another SONOCO *First*

THE REVOLUTIONARY DUROWELD PROCESS

- DACRON TUBES
- BOBBINS
- TWISTER TUBES
- SPOOLER SLEEVES
- CHEESE CORES
- NYLON SIZING CORES
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- and many other possible uses!

Can be supplied with various surfaces. Ends can be colored for identification.

DUROWELD by SONOCO — developed to give the textile industry a tough, low cost, reusable carrier.

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DUROWELD by SONOCO was perfected only after months of exhaustive research and tests, and represents an important carrier advancement with industry-wide benefits.

If you are at present experiencing carrier problems, our sales and engineering departments would be happy to discuss them with you.

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SERVES THE WORLD
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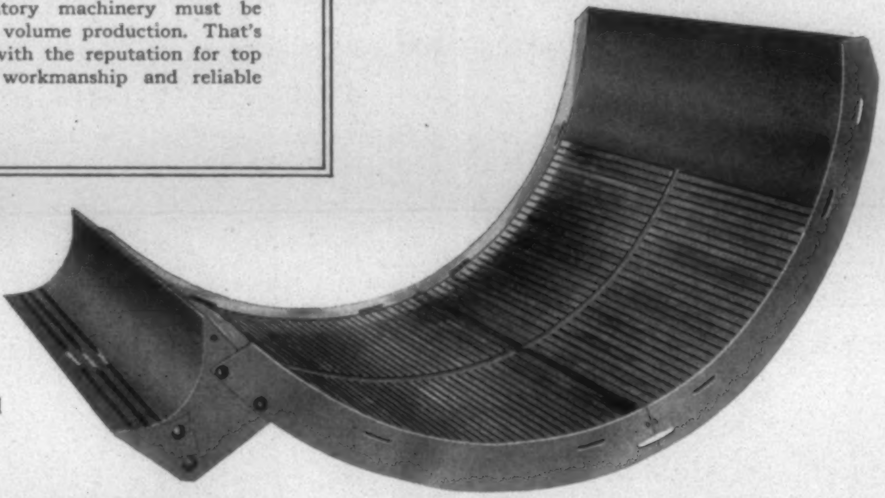
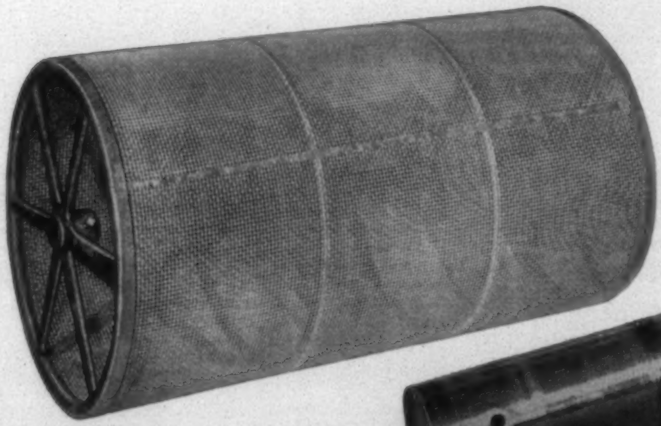
MORE PRODUCTION AT LOWER COSTS with GASTONIA TEXTILE SHEET METAL PARTS

The quality and the profit of your end product starts at the beginning—where preparatory machinery must be geared for efficient, economical volume production. That's our job—a job for specialists with the reputation for top quality products, painstaking workmanship and reliable service.

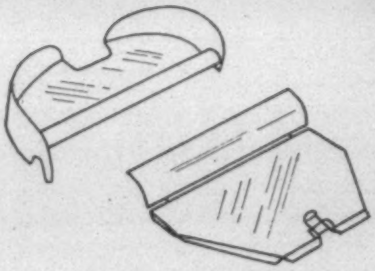


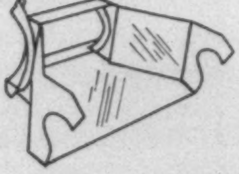
Standard type rib or perforated Card Screens are precision built on special jigs. Every screen is inspected and double checked for accuracy and tolerance.

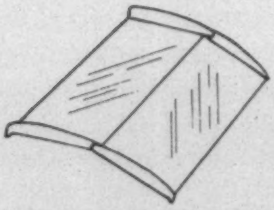


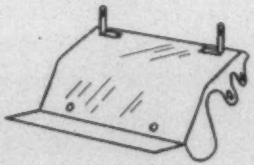
Picker, Condenser and Waste Machine Screens of maximum strength and durability are constructed of the best materials available.

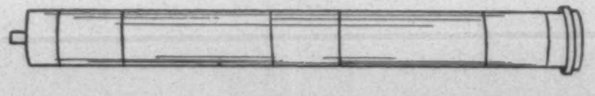
New and rebuilt Cylinders are dynamically balanced to reduce vibration to an absolute minimum.











Years of practical experience —the finest of raw materials —and precision machinery in the hands of skilled workmen go into every product.

GASTONIA TEXTILE SHEET METAL WORKS, Inc.
GASTONIA, NORTH CAROLINA
A SHEET METAL WORKS SERVING TEXTILE MILLS

FROM ANDROSCOGGIN, ME. TO CHATTAHOOCHEE, GA.
RIGHT THRU THE INDUSTRY
LEADING MILLS WET-PROCESS WITH

Westvaco

Low-cost quality that appeals to Yankee acumen . . . courteous trustworthy service that makes friends in Dixie . . . up and down the Atlantic seaboard, more and more mills are specifying "Westvaco" on their alkali and phosphate orders.

With alkali production at South Charleston, West Virginia and phosphate production at Carteret, New Jersey, we can give you excellent service by rail or truck; carload or l.c.l.; in tank cars, tank trucks, drums or bags, as the case may be. Combination orders can cut your costs at a time when every penny counts. Scan the list at the right and let us quote you on a fair share of your needs for any of these Westvaco Chemicals.

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Flake, Solid and Ground, 76% Na_2O
50% and 70-73% Liquid

CAUSTIC POTASH

Flake, Solid and 45% Liquid

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Why mills like

Coloray

T.M.

Courtaulds' solution-dyed rayon staple of proven colorfastness. Since '38 . . . produced in vast quantities for American and British mills

For 15 long years, mills have been processing Courtaulds' solution-dyed rayon staple on a vast scale. They like its outstanding colorfastness and its many other advantages.

The price advantage! Coloray offers substantial savings over stock, yarn or piece-dyeing . . . adds brilliance and bloom . . . even enriches the hand of the finished fabric . . . gives you a tremendous quality advantage as well.

Color blending is easy with Coloray. And the possibilities are unlimited! Over 2,000 different color effects have been achieved by Courtaulds. You can get true solids, rich heather tones, a remarkable range of shades and textures. And Coloray blends beautifully with other fibers — acetate, wool, cotton, the new synthetics.

Colors are uniform — side to side, end to end, batch to batch. No color variation at all! Color can be identical in different weights of fabric. Matching problems are gone for good.

You can buy small or large quantities — any amount of Coloray from pounds to bales.

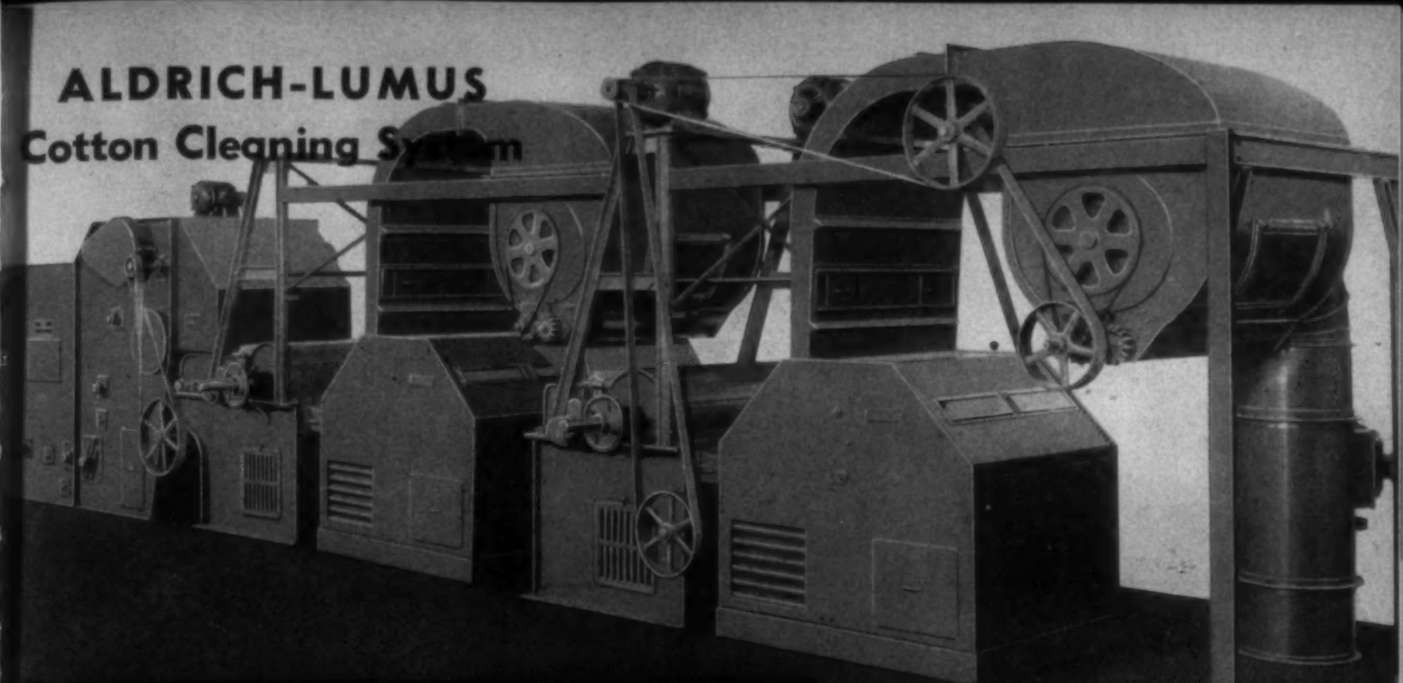
Fly problem minimized — just follow Courtaulds' scientific sequence in running your colors, and practice simple good housekeeping in the mill.

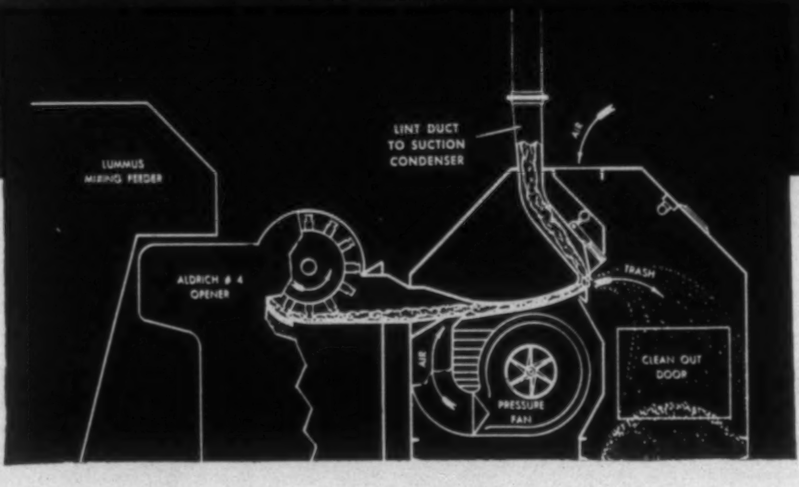
Of course, no fiber is problem-proof. Not even Coloray. But Courtaulds knows how to solve or lighten any problem you might have. Courtaulds' unique 15-year know-how in producing and processing solution-dyed fibers is at your service, via a staff of expert technicians.

Coloray and white rayon staple are produced in Courtaulds' new plant at LeMoyne, Alabama. Thirteen basic colors are available in these deniers and staple lengths: 1½ denier — 1 9/16" staple, 3 denier — 2" staple, 4½ denier — 6" staple.

For further information, write Fabric Development Dept.

COURTAULDS, INC., *first name in man-made fibers, first name in solution-dyeing*
600 Fifth Avenue, New York 20, N. Y. • Greensboro, N. C. • LeMoyne, Ala.





Super-Jet picks up the cotton on a stream of air, floats it to a sharp angle where an aperture strips out the trash. No saws, no moving parts at all.

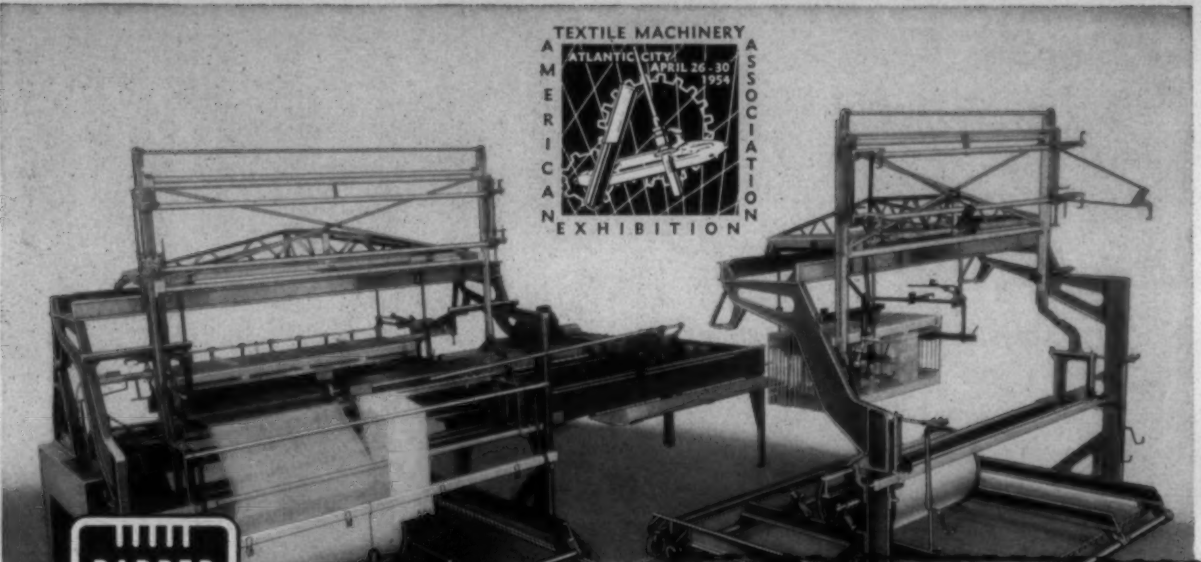
AN ENTIRELY NEW AND DIFFERENT COTTON CLEANING SYSTEM . . .

The Super-Jet is the basis of a new system of cotton cleaning that really cleans cotton. In use for more than three years it has invariably removed more trash than any system with which it has been compared.

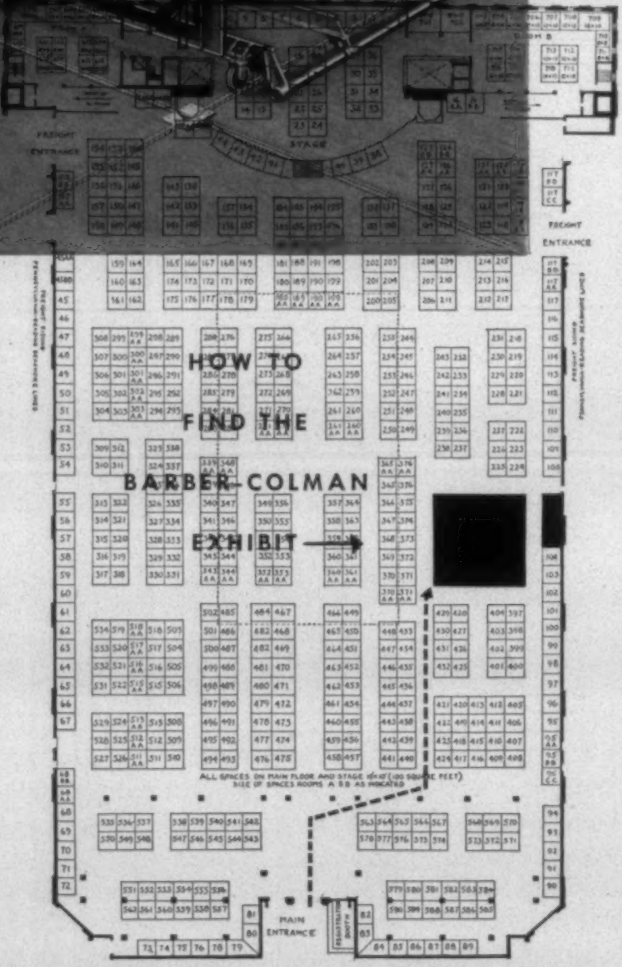
The Aldrich-Lummus system causes no fibre damage, creates no neps, removes no spinnable fibre because the trash is removed almost entirely by air, with only enough beating to open the cotton so it can be cleaned.

We have been given permission to invite you to visit mills with Aldrich-Lummus installations, running the same type of cotton you use, and we will gladly arrange such visits at your convenience.

ALDRICH-LUMMUS CLEANING SYSTEM



WILL EXHIBIT...



THIS VERSATILE WARP DRAWING MACHINE

The range and flexibility of Warp Drawing Machines now available provides anyone who has warp drawing problems with a profitable solution through use of Barber-Colman equipment. See this extremely interesting and typical machine *in operation* on complicated stripe beams . . .

AT THE **1954** AMERICAN
TEXTILE MACHINERY EXHIBITION
ATLANTIC CITY
APRIL 26-30, 1954

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • WARP DRAWING MACHINES

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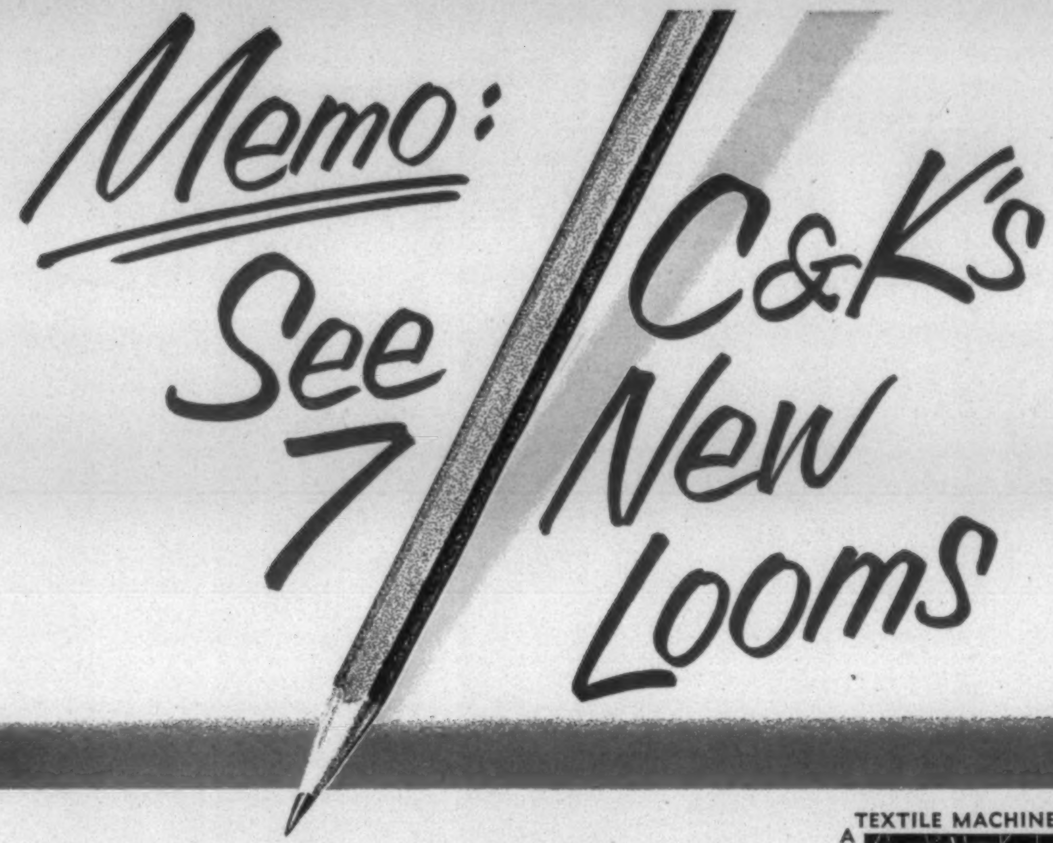


American Textile Machinery Exhibition

ATLANTIC CITY, NEW JERSEY
APRIL 26-30, 1954

TEXTILE MACHINERY
AMERICAN ASSOCIATION
ATLANTIC CITY
APRIL 26-30 1954
EXHIBITION

Crompton & Knowles Loom Works will occupy spaces 323-338 and 330AA-331AA in the huge exhibition hall at Atlantic City, April 26-30, 1954. Some 270 exhibitors have already spoken for over 90,000 square feet of this building. Crompton & Knowles' space will be larger than they have occupied before because of the variety of new looms they plan to show.

Crompton & Knowles' entire line will place even more emphasis than heretofore on the flexibility and versatility built into their looms and the latitude thus given the cloth designer and weaver. To be shown are:

1. A new Narrow Fabric Loom weaving zipper tape.
2. An entirely new W-3A Loom equipped with a Select-A-Pic mechanism with which many pick-and-pick weaves may be woven automatically.
3. One of C&K's latest Jacquards.
4. Five new looms never shown before. These are:
   - a. One loom weaving a gray flannel filling mix.
   - b. Another loom for the automatic weaving of a two-color denim.
   - c. Another "first"—a loom that can weave automatically 4x1 filament dress goods.
   - d. A loom developed for 4x1 spun rayon blends.
   - e. A 2x1 loom weaving upholstery fabrics.

It is planned to build these new looms with a single color rotary magazine, but they also may be equipped for two and four-color work. They can be equipped with undercam harness motions, end cam harness motions, dobbies, head motions, and jacquards.

All of the new looms will be equipped with new letoffs, although any of the present letoffs may be applied to them. All of the new looms may be equipped with any kind of conventional takeups.

C&K
A Loom for Every Woven Fabric

This "Invisible Trademark" Stands Back of the Trademarks of the World's Finest Fabrics . . . which are **WOVEN** Fabrics.

Crompton & Knowles LOOM WORKS

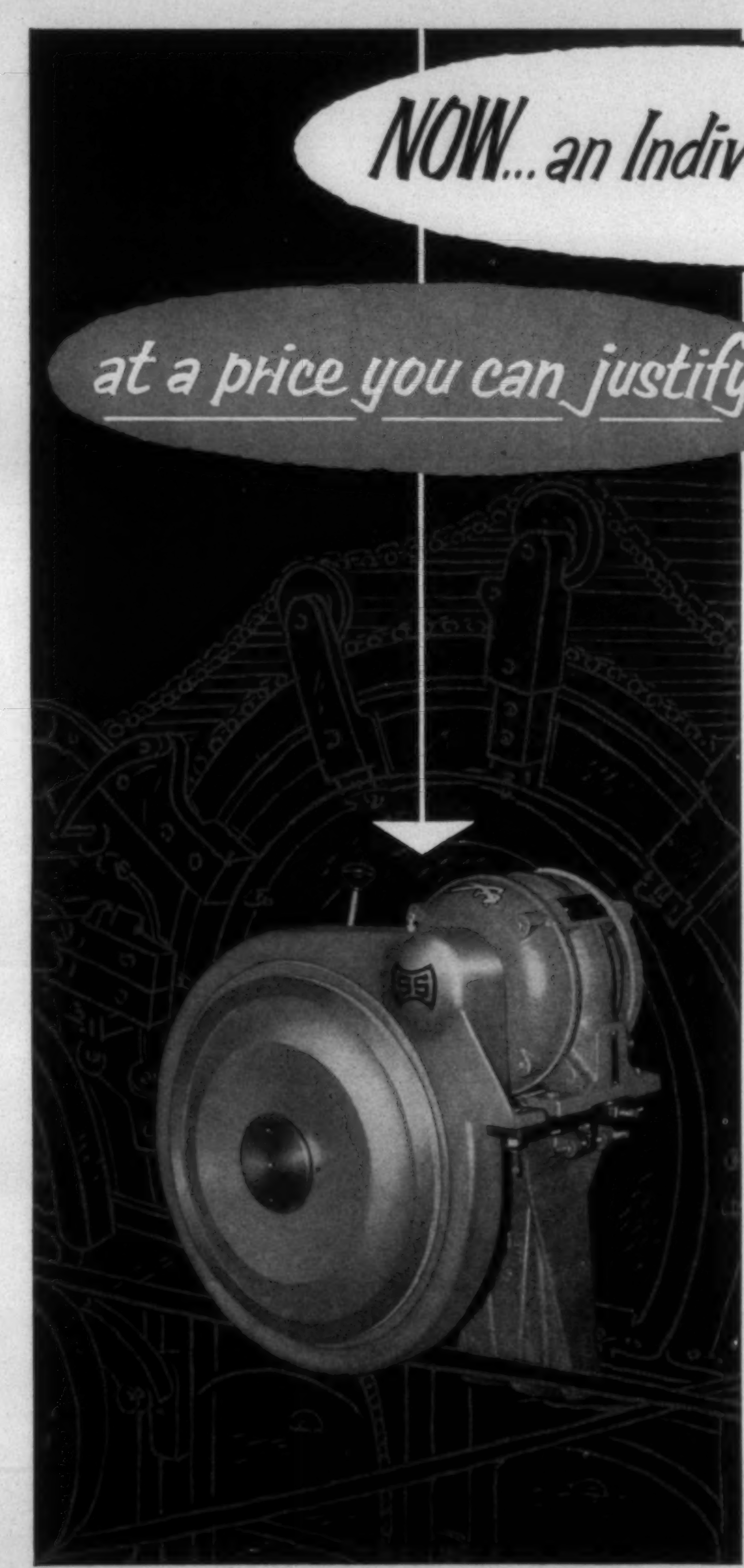
WORCESTER 1, MASSACHUSETTS, U. S. A.

Philadelphia, Pa. • Charlotte, N. C. • Allentown, Pa.

Crompton & Knowles Jacquard & Supply Co., Pawtucket, R. I.

NOW... an Individual Card Drive

at a price you can justify



Here is a new individual card drive. Not only is the first investment for this drive low, but its simple time-tested principle assures little, if any, maintenance cost.

THIS DRIVE MAINTAINS STANDARD CARD OPERATING PROCEDURE AND PRESENT METHOD OF STRIPPING, eliminating cost of separate stripping devices and dangers inherent in training personnel in new methods. The operation, in addition to being easier and more quickly executed, is safer than ever before.

MILLS EQUIPPED WITH THIS DRIVE CAN STANDARDIZE CARD PRODUCTION since the slippage associated with any type of belt drive has been eliminated. It embodies the advantages of direct drives plus the slip-clutch safety to prevent possible damage from chokes.

AS A PACKAGED UNIT, this drive is easily and quickly installed. It is fitted with a rigid mounting direct to the card frame with no complicated reduction unit or overhung load on the cylinder shaft. Occupying approximately the same space as existing flat belt drives, this drive leaves the flats clear and eliminates the danger of springing arches or damage to flats due to vibration.

Now you can reduce the production loss of group shut-downs and eliminate the accidents and costly maintenance associated with belts and line shafts.

If you haven't seen this drive, contact your nearest Southern States representative or write today for Bulletin No. 200.

All the parts necessary for continuous stripper drive can be supplied at moderate extra cost.

Southern States SS **Equipment Corp.**
HAMPTON GEORGIA

Bright new addition to our line

NATIONAL SULFUR BRILLIANT GREEN 5BCF

National Sulfur Brilliant Green 5BCF is a very bluish sulfur green possessing good brightness and is applicable to cotton and viscose. For a dyestuff of this type, it has good fastness and should be widely useful for work clothes, industrial uniforms, cotton hosiery and various kinds of inexpensive garment fabrics. It has the additional advantage of being suitable for use on cloth that will be rubberized.

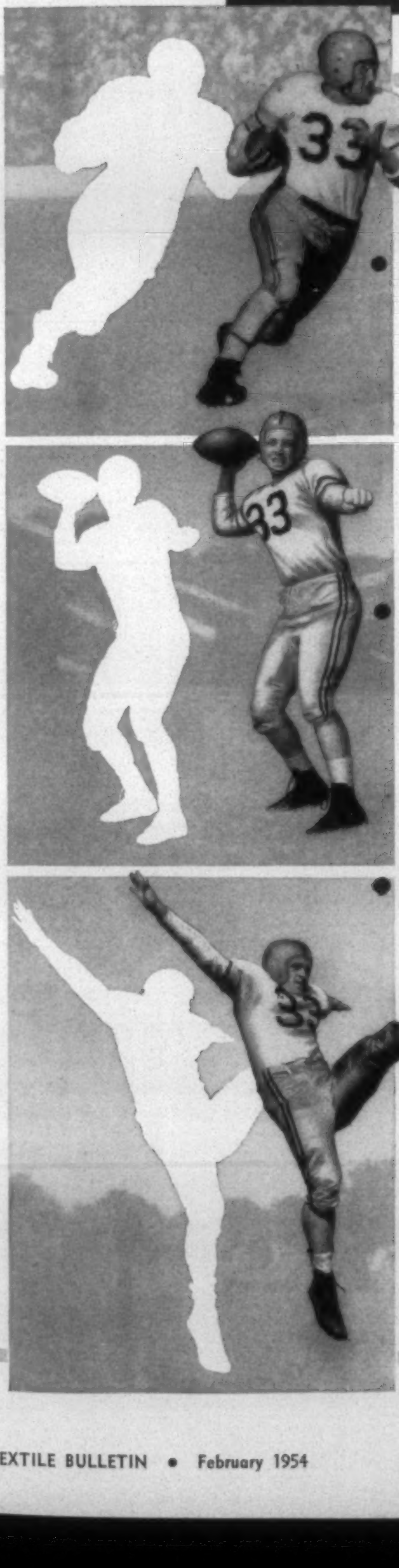
The nearest National Aniline office will be pleased to furnish samples and complete fastness properties, and to provide prompt service on your complete dyestuffs requirements.

NATIONAL ANILINE DIVISION
ALLIED CHEMICAL & DYE CORPORATION

40 RECTOR STREET, NEW YORK 6, N. Y.
Boston Providence Philadelphia Chicago San Francisco
Portland, Ore. Greensboro Charlotte Richmond Atlanta
Columbus, Ga. New Orleans Chattanooga Toronto

a genuine triple-threat performer!

CALSOLENE OIL HSA



In Synthetic Yarn and Fabric Dyeing!

• • • **RUN** tests and you'll find CALSOLENE OIL HSA works wonders in synthetic dyeing operations . . . as a lubricant to prevent chafing and cracking or as a thorough wetting agent preventing ballooning of fabrics in the dyebath.

In Leveling Operations!

• • • **PASS** this good word along! CALSOLENE OIL HSA is the fastest, most effective, most stable leveling agent you could use!

In Dyeing Fabrics To Be Waterproofed

• • • **KICK** . . . you just won't have any "kicks" about the way CALSOLENE OIL HSA rinses and provides non-rewetting properties in preparation for water repellent finishing!

Ask for a trial run . . . and you'll join the volume CALSOLENE OIL HSA users!

Complete information in AHCO Technical Bulletin 109.

ARNOLD, HOFFMAN
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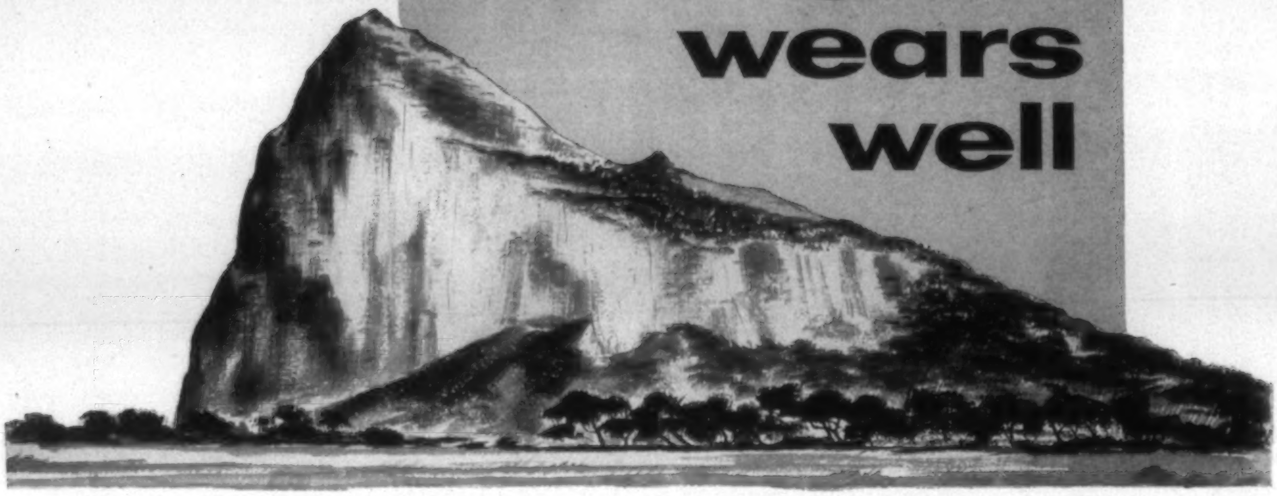
AHCO PRODUCTS

Calgon* wears well



because . . . its unique qualities as a metallic sequestrant and as a dispersing agent have made it the leader in its field. Here's why . . .

Calgon	softens more water for less money than any other sequestrant available.
Calgon	synergizes the detergency of soap. Many sequestrants do not have this property, while others are less effective than Calgon. Calgon also improves the cleaning power of synthetic detergents.
Calgon	disperses pigments such as clay, calcium carbonate, titanium oxide and others used in cotton and rayon finishing.
Calgon	solubilizes and disperses dyestuff for clearer, brighter dyeing of textiles.
Calgon	prevents the contamination of water from iron corrosion products. Using very small quantities of Calgon, this "Threshold Treatment"† is the most economical method for eliminating iron contamination in any textile plant water supply.

*T.M. Reg. U.S. Pat. Off. †Fully licensed for this use under U.S. Patent No. 2,337,856

No other sequestrant can give you so much for so little. The economies realized through the use of Calgon far outweigh its cost.

Write for bulletin "Calgon Data for the Textile Chemist"

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HALL
BUROMIN
CALGON

CALGON inc.
A SUBSIDIARY OF HAGAN CORPORATION
HAGAN BUILDING
PITTSBURGH 30, PA.

The WHITIN Model J Comber

the *Finest* comber in the world

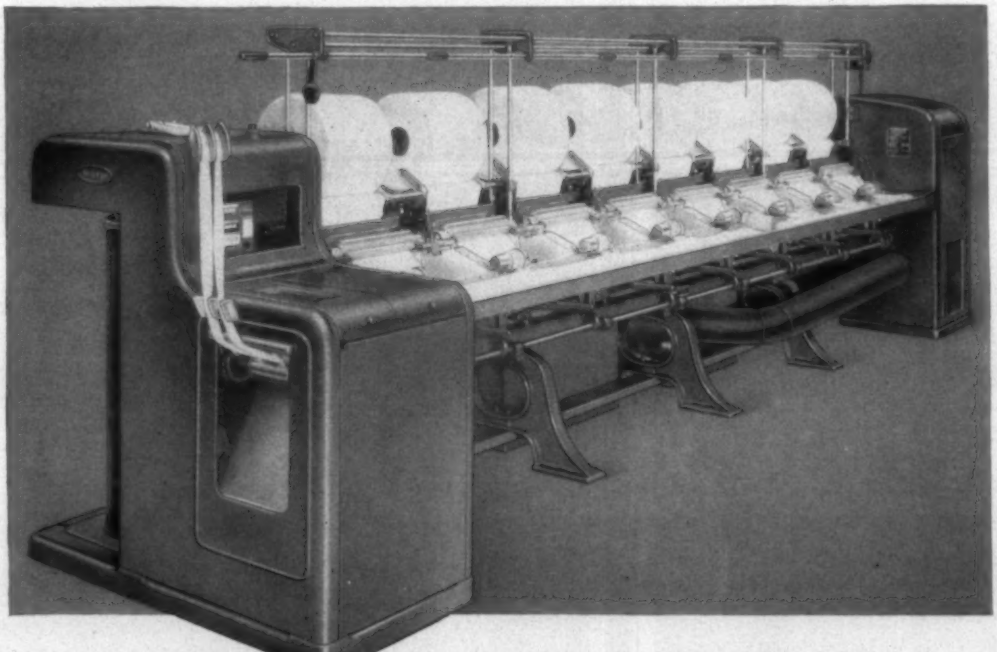
Since its introduction in 1948, the Whitin Model J Comber has established records of performance for production and quality, at costs lower than were ever considered possible for a comber.

In North America, South America, and in Europe, wherever fine combing is both a science and an art, it has been acclaimed and accepted as being the finest comber ever built. It is sturdy, structurally simple, has fewer parts than competitive combers, and operates at 150 nips per minute with a minimum of vibration. It produces a Bi-coil sliver — two separate slivers deposited in the same can.

At this high productive speed, in every phase of operation, for sliver quality, for nep removal, for extreme accuracy of waste control, the Whitin Model J Comber has emerged as the best in test after test in actual mill operation. This comber stands alone and unapproached by any other comber for the extraordinary and remarkably low maintenance records established in scores of fine combed yarn mills.

These mills include practically all of the finest combed yarn mills in the industry, with installations ranging up to as many as 200 combers. All these mills report that settings are held for *very long periods of time.* Also, adjustments require little time and are simple and easy to make. When the combers are overhauled, no sign of wear is found. The extremely important factor of comber efficiency is reported as up to 96 per cent for each comber in the installation.

If you want the finest combing available at the lowest possible total combing cost, there is only one comber for you — the Whitin Model J — the finest comber in the world!



For complete information ask your Whitin representative or write direct to us.

TEXTILE MACHINERY
AMERICAN ASSOCIATION
ATLANTIC CITY
APRIL 26 30 1954
EXHIBITION

Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS
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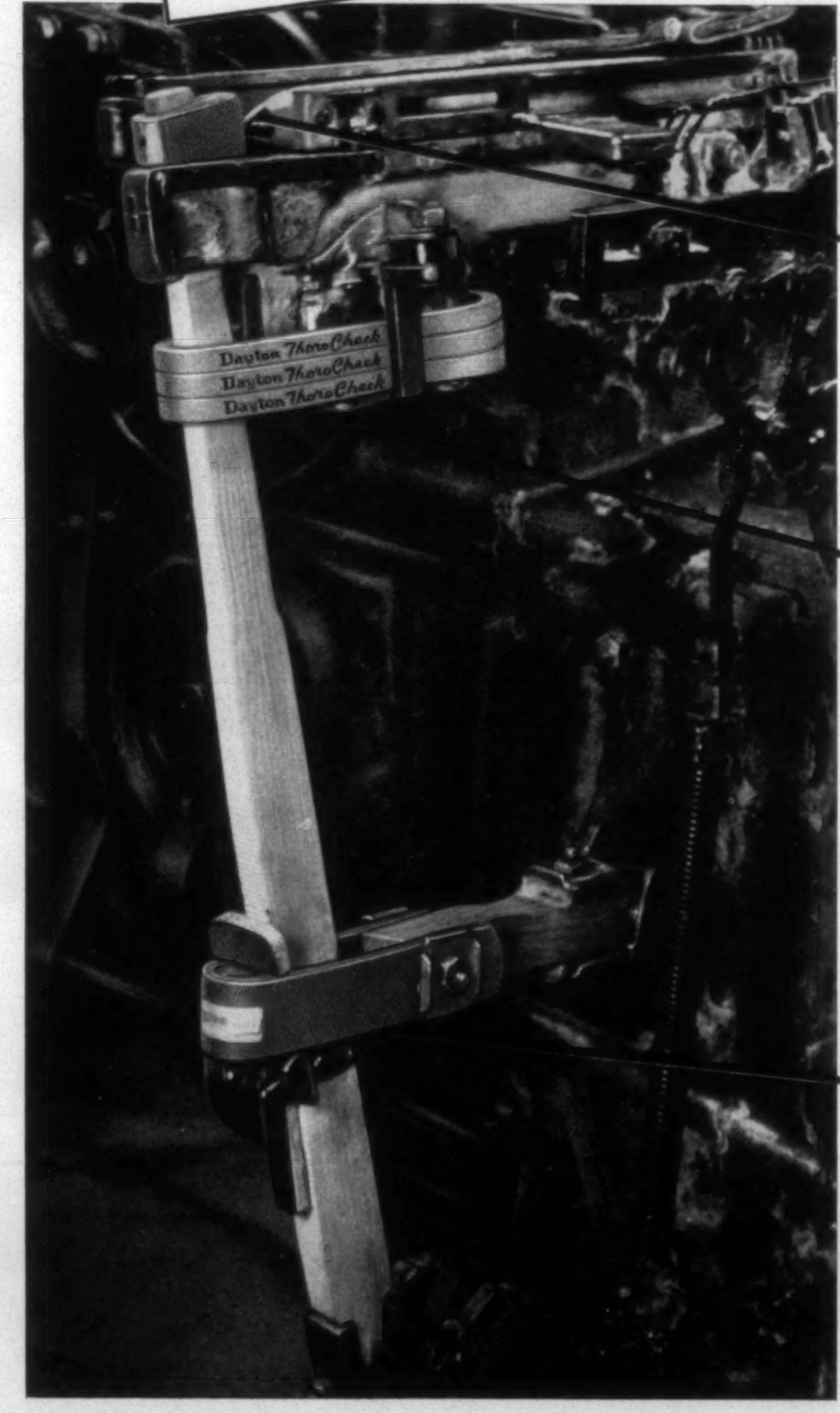
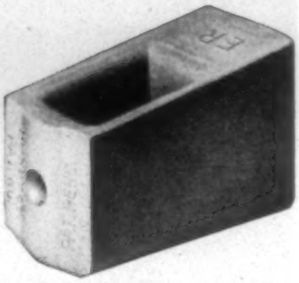
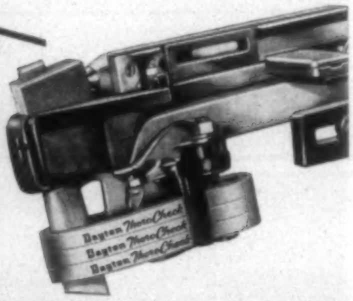
MILL PROVED

Dayton Cut

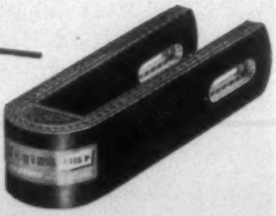




Dayton Thorobred Loop Pickers often last twice as long as other pickers because of scientific design which increases efficiency, reduces wear. Will outpick any ordinary picker on the market.



Dayton ThoroCheck Endless Check Straps save time and money in spinning operation—outlast old style check straps 2 and 3 to 1. Need little or no adjustment.



Dayton Thorobred Deluxe Lug Straps with built-in cushions, save wear and tear throughout entire loom by more effectively absorbing shock of picker stick thrusts—keep maintenance costs low.

Textile Products

Weaving Room Costs

The proof is on the loom—and that's where Dayton ThoroChecks, Thorobred Lug Straps and Thorobred Loop Pickers are cutting maintenance costs, reducing down-time and increasing production every day!

In the search for new economies, you can be *assured* of savings with Dayton "mill-proved" products. Look at the results actual mill installations are producing:

One eastern mill* installed Dayton ThoroCheck Endless check straps, ran them at 182 picks per minute. After *14 months*, they were still going strong—no signs of wear, no adjustment needed. The savings in replacement costs, time and labor have paid for the installation and change-over time and again.

Mill case histories such as this clearly illustrate how Dayton ThoroChecks are forcing costs down through longer, trouble-free service. Many mills report as much as 25% to 50% savings upon conversion to Dayton ThoroChecks.

Intensive research and development have made this outstanding performance possible. Daytons give you a safer endless strap that checks more smoothly, eliminates drag over the stick, stops it with less impact on each strap, and functions efficiently at highest speeds. Result—less wear and longer life with every set of Dayton ThoroChecks. Unaffected by temperature or humidity, ThoroChecks give fast, efficient starts after week-end shutdowns, making possible sizeable increases in production.

For *complete* control of picking motion costs, back up ThoroChecks with Dayton Thorobred Lug Straps. The built-in cushion feature absorbs the terrific thrusts of quick starts and stops and saves wear generally throughout the loom. Proper "give" and immediate "recovery" effect longer life and lower replacement costs.

Dayton specially designed Loop Pickers compound your savings because they're built to stand up for long periods under the pounding of high-speed shuttles, give perfect shuttle contact because of the slightly tilted construction. They stay put on the stick, keep their shape, and practically eliminate jerked-in fillings. Rounded front edges prevent hanging-filling; narrow back permits free non-wear on lay in strap. Last twice as long as other types of pickers.

No other combination can guarantee the efficiency and economy of this mill-proved Dayton trio. Get complete details, mail coupon today!

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Dayton Rubber Co., Textile Division,
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Yes, I'd like to reduce operating costs on my looms.
Send additional cost-free information on:
☐ Dayton ThoroCheck Endless Check Straps
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*Mill Name*__________________________
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*City*__________________ *Zone*____ *State*________

WHAT OTHERS ARE SAYING

Tribute To A Mill Man

IN 30 years behind a reporter's typewriter, we have run the gamut of human emotions, from moods of unbridled joy to that of deepest pathos. But we have never penned one with more feeling than the one we chronicle here today.

John F. Matheson has made his exit from Mooresville Mills after 27 years with that firm. He made it in a manner in keeping with those 27 years as he had lived them, with graciousness, dignity, and a smile.

"I have no regrets," he told this reporter. "I gave it the best years of my life, and the best thinking and planning of which I was capable."

A product of South Carolina's pioneer stock, he grew up on a farm near Cheraw. From high school there, he went on to Raleigh and was graduated in textiles from State College, coming to Mooresville Mills the day after graduation. He began work in the dye plant, and in eight years had worked his way through the mill and into the president's chair. It was during those early years that he became known as "Johnny" to the hundreds of mill employees. He never lost that nickname of affection and esteem, from either supervisor or sweeper, as he put together nearly three decades among the people he loved.

And Tuesday night it was still "Johnny" to the multitude of mill employees who came and went at his home on North Main Street. Through the years he had been their friend, and here and there a man or woman could be seen trying to hide a tear. To them he had proved that a huge textile mill could possess something other than man's greed for the material things of life. And tonight they were sad and a little bewildered and anxious to show their gratitude. In the 40 minutes we were there, people were milling all over the place, some in overalls and some in their Sunday best. They were there to pay spontaneous tribute to a man who had built Mooresville Mills from a plant of 800 employees to one of 3,000, with more than 50,000 spindles and 2,000 looms, having a capacity of more than 35 million yards of assorted fabrics a year. He had measured his achievements always by the Golden Rule, and these were his friends Tuesday night who had prospered and lived happily under such a rule.

The greatest compliment we ever heard paid to Johnny was from a man who wanted to be his enemy. Two years ago, when the C.I.O. had lost a one-sided election here, two of their main organizers came by our office. Everette Jones was leaning against the office counter and we were standing behind it.

"Want to shake?" asked one of the organizers, holding out his hand.

"Sure," we said. "We've go nothing personal against you. We just didn't agree with your cause."

"Your paper helped," said the other organizer, "but it was Matheson who beat us. Those people down there really believe in him."

"Yeh," said his partner, "he must be one helluva decent guy."

And that, coming from a C.I.O. organizer, we'll have to buy.

—*Mooresville* (N. C.) *Tribune.*

Counting The Unemployed

THE controversy started by Senator Douglas and by the C.I.O. when they separately challenged the accuracy of Commerce Department figures on unemployment needs to be fully understood. In December, the department reported the total number of unemployed at 1,850,000, the highest in a year—but, according to both Senator Douglas and the C.I.O. not so high as the figure really is. If they had said that the department does not measure adequately the size of the marginal labor force, they would have been entirely correct.

The Census Bureau, which makes the employment studies for the Commerce Department, describes a person as unemployed if he is out of work and is seeking work. If he is not looking for work, he is not described as unemployed. For example, if a housewife is looking for a job, she is listed as unemployed; if she is not looking for a job, she is not counted in the labor force. It was the failure to make this distinction that has caused the controversy.

If jobs were more readily available there would be more persons in the labor force than there are at present. Actually, there are fewer persons in the labor force, according to the latest report, than in many months; yet everyone knows that there are more people in the country every month. When the Korean war broke out there were all kinds of demands for workers. Housewives, old people, young people could work in part-time jobs or in jobs otherwise especially suited to them. Now there are not so many jobs, and despite the gain in the total population there has been a shrinkage in the labor force.

That is an important statistic for the economist. The withdrawal of persons from the labor market, whether voluntary or not, is significant, for it means that there are fewer people producing goods and fewer people earning money.

Eventually that means a drop in production and a drop in consumption. The effect is certainly deflationary.

But there is no reason to challenge the reliability of the government's figures, which are collected by the careful statisticians of the Census Bureau. They sample check the number of persons working and the number of persons not working and seeking work. That is how they found that in December there were 60,764,000 employed in the civilian labor force and 1,850,000 unemployed. The two figures totaled equal the civilian labor force. If there were a war or emergency requiring additional workers, the size of the labor force would increase by several million almost overnight, as students, older persons and housewives reentered the labor market. The unemployed figure standing alone tells only half the story; it must be analyzed in connection with the rise and fall in the size of the labor force.

—*The Washington Post.*

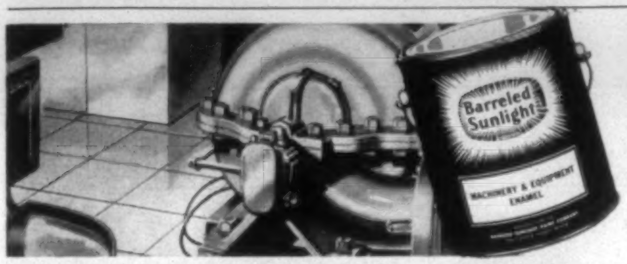
Business Conditions Challenge Us All

AT best, it is apparent that the sledding will be rough during 1954. It is unwise to assume too pessimistic an attitude, but on the other hand it is necessary to be realistic and recognize the extremely competitive situation in the textile industry.

With that realization, a program of

What the WELL DRESSED PLANT will wear in '54

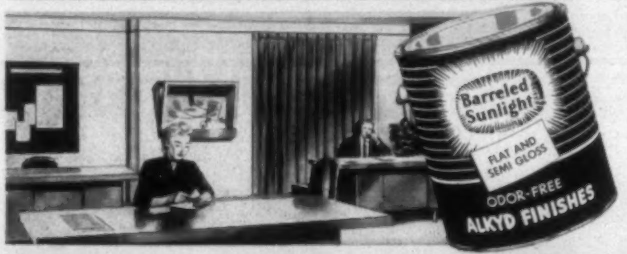
In Production Areas. Barreled Sunlight Super Hiding* Finishes — heavy duty interior paints especially built for rugged service on ceilings, walls and dadoes. Take up to a full gallon of thinner to the five-gallon bucket. Go on fast and easy . . . hide solidly in one coat . . . save you money on both paint and labor. In colors engineered for industrial interiors — plus snowy whites that really *stay white* thanks to our famous, exclusive "Rice Process."



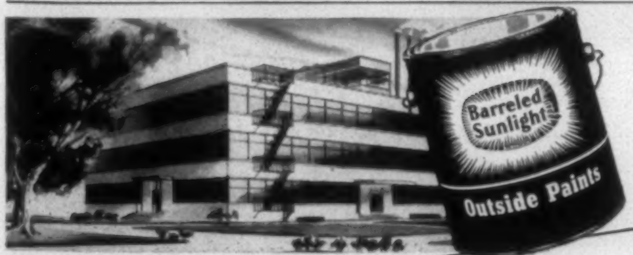
On Machinery and Equipment. For improved appearance, efficiency and safety . . . Barreled Sunlight Machinery & Equipment Enamel and Barreled Sunlight Safety and Piping Enamels. Easy to apply by brush or spray . . . dry *fast* to a smooth, tough surface that is extremely durable and resistant to oils and greases. Modern, industry-approved colors for "contrast painting" of machinery and clear identification of piping contents, plant hazards and safety equipment.

Barreled Sunlight
ACID AND ALKALI RESISTANT COATING

In Trouble Spots. Where acids, alkalis, fumes, moisture, mildew and other destructive agents make maintenance a tough and costly problem . . . specialized protective finishes such as Barreled Sunlight Acid & Alkali Resistant Coating and Mildew Resistant Gloss do the job where other paints fail. A trained Barreled Sunlight representative is at your service without obligation to help you lick these problems on the basis of actual "on-the-wall" tests.



In the Office and other "non-plant" areas, two brand new and outstanding decorative finishes — Barreled Sunlight *Odor-Free* Alkyd Flat Enamel and *Odor-Free* Alkyd Semi Gloss. Truly odorless so painting can be done at "straight time" right during office hours. Long wearing and really "scrubbable" finishes for walls, ceilings and woodwork that keep their fresh-painted look longer. Snowy white and a rainbow of smart colors to fit every decorating need.



On the Exterior. A well dressed plant helps sell your company and your products, and Barreled Sunlight exterior paints will *keep* it well dressed longer and at lower cost. There's a Barreled Sunlight quality paint for every type of outside surface — including metal primers, masonry finishes, aluminum paints, body and trim paints and a host of others — each designed to give maximum protection and to save you money both at the start and "over the long pull."

*Reg. U. S. Pat. Off.

and the Reasons —

Every Barreled Sunlight job is a top quality job. It represents the highest in everything except the cost. Because Barreled Sunlight paints are *engineered* to deliver greater yardage, better hiding, easier application and longer service, they give you really worthwhile savings not only in material *but also in labor which today accounts for at least 80% of total painting costs.* You paint less often — save all along the line. Write today for free Specifications Catalog.

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Barreled Sunlight Paints®

In whitest white or clean, clear, wanted colors, there's a Barreled Sunlight Paint for every job activity can be developed to soften the impact of the "not so good" business conditions. Naturally, the cost of manufacturing is of unusual importance at this time. For that reason, efficiency and the elimination of both time and materials must be given constant attention. A low-cost mill will assuredly fare much better than one operating inefficiently.

As important as low costs are, they represent only a part of the competitive picture. During market conditions which are construed as a "buyer's market," when purchasers of fabrics can get all they want, quality is frequently a determining factor. The quality demands for the next year will unquestionably be higher than they have ever been before. Even a low-cost mill which produces inferior quality cloth will have tough going during the year of 1954.

There are few people in a mill organization that do not contribute in some way to the quality of the final fabric. For that reason, each person must continuously be conscious of the quality demands of customers and cooperate by making his efforts contribute to improved quality. The proper attitude in respect to efficiency, eliminating waste, and improved quality can result in direct benefits to all involved. Mills that are unable to sell production because of high costs or inferior quality will of necessity have a poorer operating schedule.

The capability of mills and their employees to measure up to the requirements of this competitive market will determine whether or not mills can successfully operate during the next year. The times challenge ability, sincerity, and co-operativeness.

—*The Textorian*, Cone Mills Corp.

In A Land Of Cotton, Wool At Last

THE decision of Nichols and Co. to build a $3 million wool processing plant at Johnsonville, S. C., has implications that reach far beyond the surface facts.

It represents, so far as we know, the first southward movement of a basic wool treatment plant. It was taken by a New England firm that is the largest processor of raw wool in the United States. It will be followed, almost inevitably, by other such plants and, if the normal pattern of such developments is sustained, by spinning and weaving factories in the woolen and worsted trade.

Little wonder, then, that Governor James F. Byrnes believes the move could be "one of the most significant boosts to South Carolina's economy in half a century."

More than anything else, the new plant and others to come will contribute substantially to the diversification of industry that South Carolina and the South need to attain the "balanced economy" that is the goal of Dixie planners.

It seems especially appropriate that the new plant, which will employ more than 250 workers, will be built in a section of Florence County that, up to now, has had little to show in the way of industrial progress. Such dispersal of industry—the distribution of plants throughout the state instead of concentrating them in a few highly industralized sections—is highly desirable to a healthy statewide economy.

As we understand it, the successful operation of a wool processing facility—and, by extension, of other woolen and worsted operations—depends materially upon the availability of adequate port facilities, as well as ample water and labor supplies. Within the eastern seaboard areas of both Carolinas, there is a sufficiency of all three factors.

We're proud to welcome Nichols and Co. to the land of opportunity, and commend our southside neighbors for another impressive gain. For both of the principals, the deal spells "bargain."

—*The Charlotte* (N. C.) *Observer.*

'Right To Work'

THE "right to work" law for which Governor Byrnes recently asked the General Assembly should be promptly passed.

Such a statute merely prohibits any requirement of union membership or nonmembership as a condition for employment. Most citizens of South Carolina agree with the Governor when he says:

"I believe a free man should have the right to join a union or refuse to join a union."

Laws of this type already exist in a number of states, including, in the South, Virginia, North Carolina, Florida, Georgia, Alabama, Tennessee, Arkansas and Texas. There is no doubt that their presence on the statute books helps to attract industries which seek workers who are truly free and independent.

Opposition to the proposed measure will come from those whose sympathies lie with those leaders of unions who insist on putting the interests of their organizations above those of their members. But those who have worked to bring new enterprises into South Carolina know that the absence of such a law has been a stumbling-block in some instances.

A measure such as that recommended, combined with our many natural advantages, should guarantee the industrial future of this state.

Speedy enactment of the right-to-work law will be regarded by far-seeing legislators as a "must" in their program for this session.

—*The Greenville* (S. C.) *News.*

Unions And The South

BOTH organized labor and management can find much food for thought, especially in the deep South, in the results of recent employee ballotings to determine what labor organization, if any, should represent them.

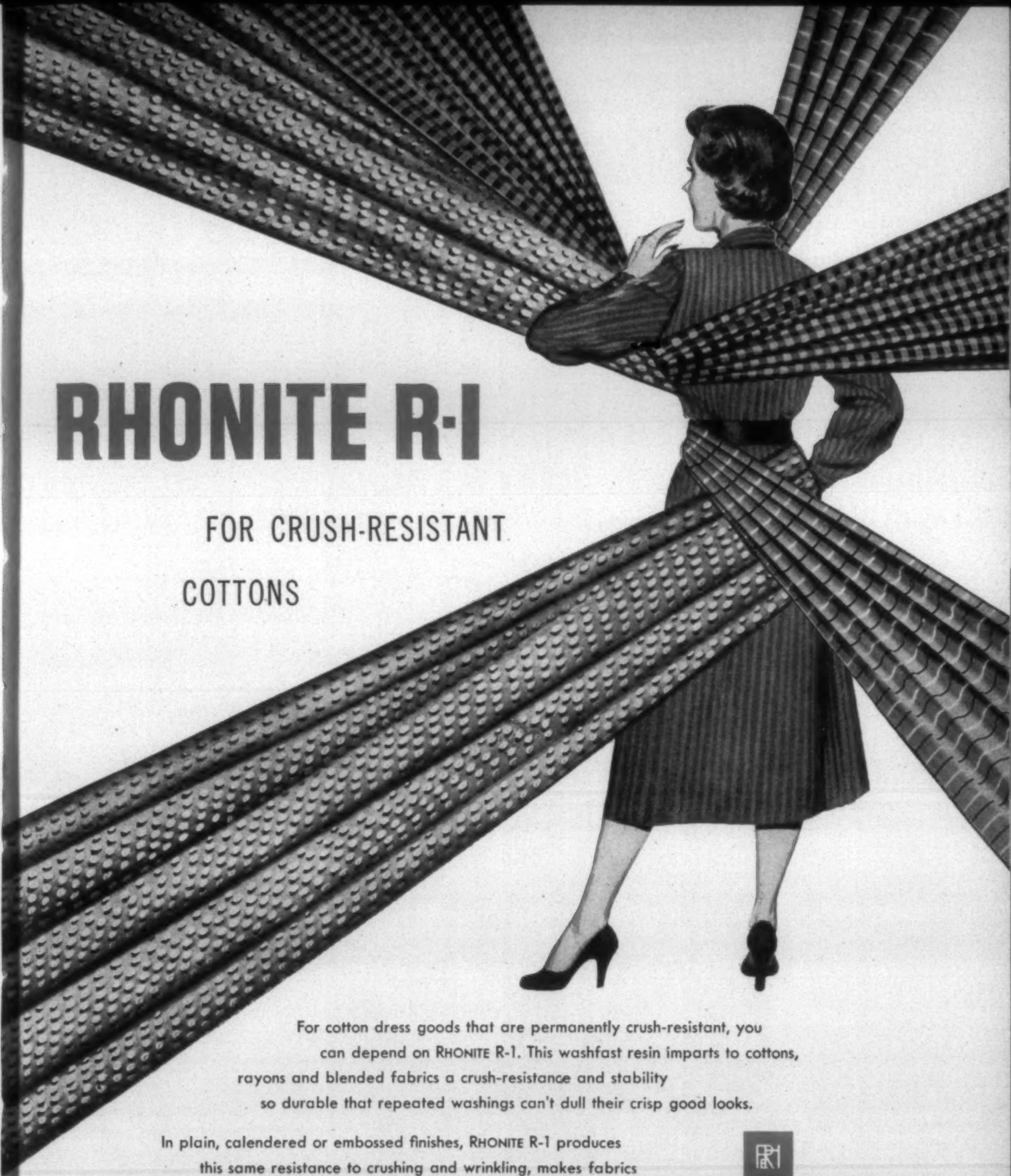
In the two most recent elections in our own area, workers in Columbus and Pine Bluff industries voted against organizing at all. Some time earlier, the employees of the Baxter Laboratories plant in Cleveland, Miss., also turned thumbs down on union representation.

The over-all Southern pitcure has been much the same, particularly in the textile industries. In all of the textile workers' elections since 1945, less than 25 per cent has resulted in victories for the C.I.O. and A.F.L., despite the fact that Southern textile mills have been a primary unionization target ever since the logical Southward migration of industry began in the relatively recent past.

The natural question is "Why?" Why haven't the South's generally new industries been unionized as have their Northern counterparts? A great many people, including Northern employers and unionizers would like to know, though for different reasons.

We believe there are two principal causes, maybe three.

The paramount one, or so we think, is that management in the South has



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FOR CRUSH-RESISTANT

COTTONS

For cotton dress goods that are permanently crush-resistant, you can depend on RHONITE R-1. This washfast resin imparts to cottons, rayons and blended fabrics a crush-resistance and stability so durable that repeated washings can't dull their crisp good looks.

In plain, calendered or embossed finishes, RHONITE R-1 produces this same resistance to crushing and wrinkling, makes fabrics withstand many launderings and still retain a lasting beauty.

For unusual crush-resistance, it pays to use RHONITE R-1.

Write or call for complete information about RHONITE R-1—one of the quality chemicals for textile finishing made by Rohm & Haas Company.

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learned a lesson from the dismal story of past employer-employee relations elsewhere. Unions were born in sad necessity, namely as the workers' answer to the industrial barons of earlier generations who degraded, enslaved and exploited them. Twenty-five years ago we first visited a Pennsylvania coal-mining community. Ever since then we have understood why a John L. Lewis could command the total allegiance of the coal miners.

That time, of course, is over. The South is fortunate in that its own industrialization has for the most part come after those barbaric days. Enlightened Southern management knows that it cannot and morally should not gut its ally in free enterprise, labor. Those Southern industries which have put this knowledge into practice have largely been spared the bitter inheritance of mistrust. For the unenlightened exceptions we have neither sympathy nor friendship. They deserve what the unions dish out.

The second reason lies in the pendulum's other extreme. For some 20 years organized labor has enjoyed an unusually strong position in our economy, in politics and in the councils of government. Often its leaders have not lived up to this new status, as even the most casual glance at the headlines indicate. A small but vital element of America's skilled workers is still Communist-dominated. The New York shipping industry is pockmarked and terrorized by union gangsters. An imprisoned labor boss gives political orders to minions in two states. The building trades unions are racketeer-ridden. Less than 400 men deprived New York City of its newspapers for 11 days last month and then settled for almost what the newspapers offered in the first place. A decent labor leader is ambushed and, years later, it is discovered that he was the target of labor criminals who wanted to turn the industries with which he dealt into a gambling hell. Arrogant thievery by union bosses goes unpunished. Contracts lose meaning in the face of uncontrollable wildcat strikes. Small wonder that workers yet unorganized vote as did the people in Pine Bluff and Columbus and Cleveland, even though the rank and file of organized labor is overwhelmingly decent.

And now for a probable third cause for organized labor's failure to capture the South. We of the South are engaged in a bitter struggle for industries, old and new, with our entrenched neighbors to the North. By and large, these competitors are unionized. As is only human, the union leaders and union workers don't want to see any industrial expansion our way, even though the South has had to be content with the hind tit for 200 years.

Before the industrial trend Southward, Northern labor had to worry only about its dealings with management. Now it has to worry about Southerners competing for jobs. So they're throwing the book at us. Take, for example, the story of a major textile concern which has an outmoded, sprawling plant in the North and two new plants in the South.

The company has had to cut down on its operations. Its ancient Northern facility was a money loser because of obsolete equipment, poor physical structure and low individual production. It could operate its Southern plants profitably because of its modernity and the attitude of its employers. But all three plants had been organized. So the Southern workers, who were newcomers to industrial employment and who for the first time were enjoying the fruits of a stable payroll, had to suffer the same percentage of layoffs as the uneconomical Northern plant.

No wonder, again, that many Southern workers are saying to hell with it.

This newspaper is anything but anti-union. We believe that the proper and only recourse of mistreated workers is unionization and collective bargaining. But we don't believe that every industrial enterprise need be organized, willy-nilly, regardless of its labor relations. We don't believe that Southern workers in new industries should fall for the crocodile tears of our Northern friends and competitors who have enjoyed a monopoly for a long time. And we do believe that organized labor's first job and responsibility today is to clean its own stables and make itself more acceptable to all Americans.

Meanwhile, we'll go ahead with our own industrialization in the South, and by the time labor has put its house in order, maybe we'll have enough industries in the South to give labor something to really work on. And if Southern management and labor can learn from the mistakes in older industries, these mistakes need not be repeated.

—*Delta Times-Democrat*, Greenville, Miss.

New England Cries Again

WE note that Congressman Lane of Massachusetts is the latest New England politician to try to cure his section's faults by wailing loud against the South. He has "woke-up" to the fact that industry is coming down here, where it is healthier to do business. So he cries out that the South is "stealing" his state's plants.

It is a pitiful tale that he told. Let's hear him in his own words: "You have put tens of thousands of New Englanders 40 years of age and over permanently out of work by stealing our industries, but don't complain when retribution catches up with you."

Lane said "physical exploitation of human beings had been repudiated as a result of the Civil War," but that the South still clung to ideas of privilege in the economic field.

"Reputable employers, paying fair taxes and real wages are entitled to protection from the devious operators below the Mason-Dixon line who are undercutting them by unfair methods," he said.

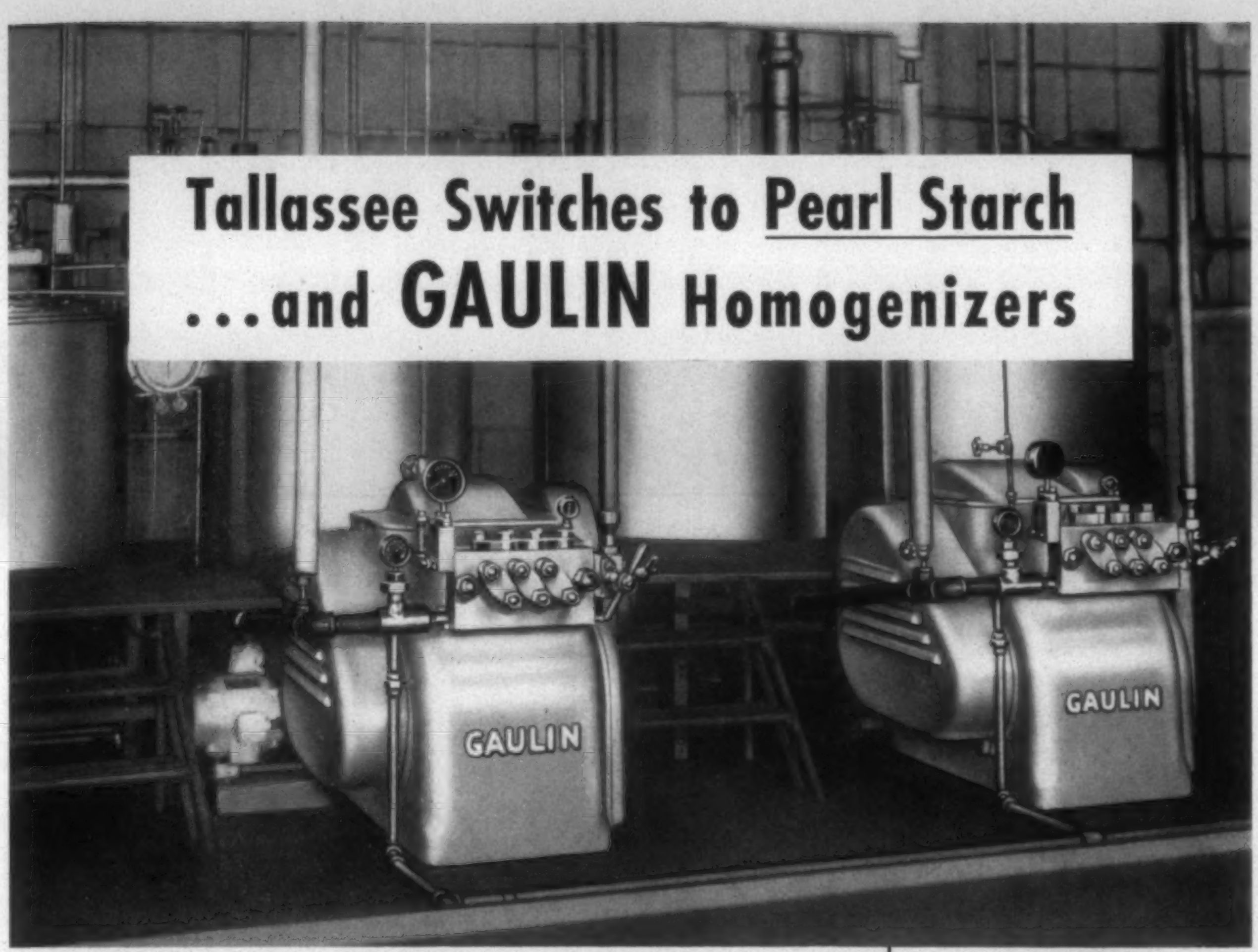
He blamed the United States government, too, for New England's plight, charging that it is subsidizing these new (Southern) plants "by not collecting taxes on money used by cities and towns in the South to build them . . . While Northern manufacturers continue to pay the taxes that make possible these concessions to their competitors."

Of course the het-up congressman's arguments won't stand up. He makes charges that aren't true. He had better be spending his time trying to rectify conditions which cause manufacturers to want to move, and thinking up means of employment to take up the labor surplus. Why the federal government is even giving contracts to New England manufacturers, who were not low bidders, just to help out the poor fellows! But Congressman Lane doesn't mention that!

These attacks upon the South only go to show that the South is making so much progress that it is getting under the skin of New England, which is on the skids. What New England needs is constructive thinking and action to remedy its own faults. That would be a much more profitable way for politicians like Congressman Lane to spend their time than making unfounded charges against the South.

—*The State*, Columbia, S. C.

Tallassee Switches to Pearl Starch ...and GAULIN Homogenizers



AND HERE'S THE RESULT as told by management of the Tallassee Mills in Alabama:

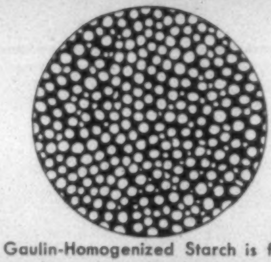
> "Since we started to Gaulin-Homogenize our size, we have less shedding at the loom and slasher. Our weave room efficiency is slightly higher. We have a more uniform size that's easier to keep within our weight tolerances. Yet — we've switched to Pearl Starch. We figure the *savings in starch alone* will pay for our two Gaulins in a year."

EXPERIENCE IN HUNDREDS OF MILLS

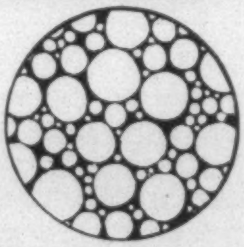
By converting starch mechanically, instead of thermally, a Gaulin Homogenizer furnishes a finer size . . . with a stable and uniform viscosity.

It penetrates yarn lightly but evenly . . . bonds fibers together smoothly, firmly — without coating or matting and making them brittle.

Experience in hundreds of mills *proves* Gaulin-Homogenized Size costs less . . . provides better pickup . . . makes a *stronger, more elastic* yarn.



Gaulin-Homogenized Starch is fine, regular and evenly mixed.



Boiled Starch is comparatively coarse, irregular and unevenly mixed.

Gaulin
TRADE MARK

SYNTHETICS — WORSTEDS

Mills are now preparing better sizes for Synthetics and Worsteds, too, by Gaulin-Homogenization. Faster, more uniform results are reported at substantially lower costs.

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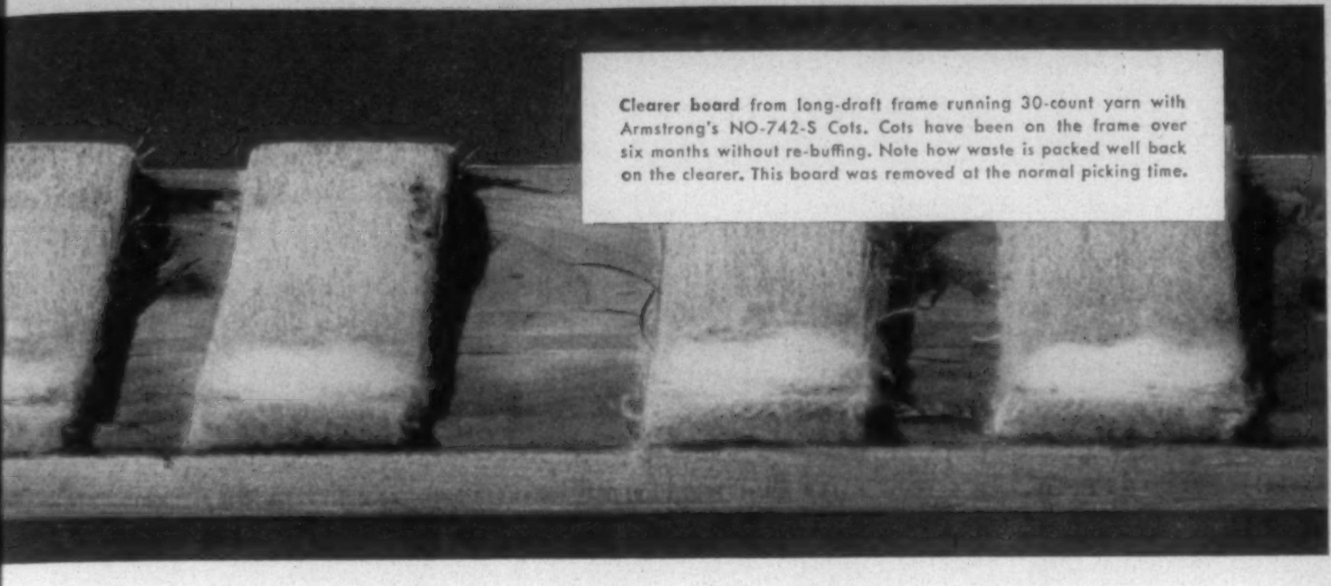
World's Largest Manufacturer of Homogenizers, Triplex Stainless-Steel High Pressure Pumps, and Colloid Mills

LOOK
at the
CLEARER BOARD

MORE THAN EIGHT MONTHS AFTER RE-BUFFING, you can still see the "teeth" of Armstrong's NO-742-S Accotex Cot. The "bite" of this unique drafting surface carries loose fibers far back on the clearer, where there's no chance of their falling off and causing yarn irregularities or broken ends.

ARMSTRONG'S



Clearer board from long-draft frame running 30-count yarn with Armstrong's NO-742-S Cots. Cots have been on the frame over six months without re-buffing. Note how waste is packed well back on the clearer. This board was removed at the normal picking time.

See how this NO-742-S Cot stops eyebrows before they start

The clearer board above shows you how effectively Armstrong's NO-742-S Cots eliminate even the most serious eyebrowing. The thousands of tiny "teeth" on the spinning surface of this lap-resistant Accotex® cot pack waste fibers well back on the clearer.

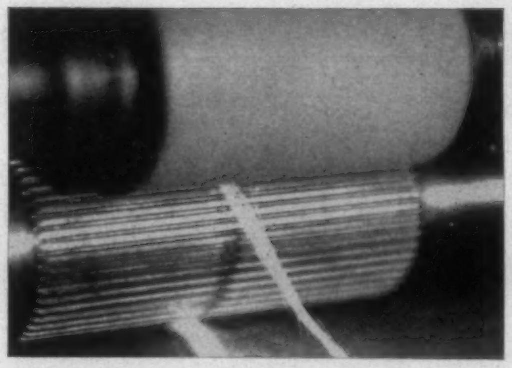
Mill men who have tested and used NO-742-S cots are enthusiastic about them. Says one supervisor, "When all the other cots show eyebrows, these new ones don't." Another supervisor puts it even more strongly. "With normal picking schedules, we've *never* had an eyebrow since we've been using NO-742-S Cots."

Only one re-buffing per year.

A third mill man likes the clean operation and long life of the NO-742-S. "Your NO-742-S Cot," he reports, "runs exceptionally clean without slicking or glazing. As a matter of fact, I only have to re-buff them once a year."

If you've been seeing too many eyebrows on your clearer boards, this is the cot you need. The NO-742-S has stopped eyebrowing on all kinds of spinning equipment and on every type and count of yarn tested.

Your Armstrong man will be glad to help arrange a test of NO-742-S cots on your frames. Call him or write direct to Armstrong Cork Company, Textile Products Department, 6502 Davis Avenue, Lancaster, Pa.



WITH REVOLVING CLEARERS, USE THE LAP-RESISTANT J-490 COT

For spinning fine yarn, and for any count yarn with revolving clearers, Armstrong's J-490 Accotex Cots have proved ideal on thousands of frames. Special electrolytes added to the J-490's long-wearing synthetic rubber composition make it highly resistant to lapping. The J-490 runs exceptionally clean, too—it's not affected by oil, dyes, or commonly used textile solvents. If lapping is a problem, call your Armstrong man today and arrange for a test side of these lap-resistant J-490 Accotex Cots.

ACCOTEX COTS

textile bulletin

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Vol. 80 February 1954 No. 2

This Is The Time For—What?

It seems that the industrial world stands as divided as sin and Sunday these days—standing on the threshold of nobody knows what. Perhaps like small boys at the ball park with only one knothole to go around, scrambling for a "look-see," afraid, literally, that they will miss what's coming off next.

What they need is tomorrow's newspaper to give further rise to optimism and slam the door on fear. There should be something to stimulate enthusiasm, so that enthusiasm can give rise to well-grounded confidence and solid leadership. There should be enough optimism to go around, to reach the core of pessimism, and to make its effect known.

You can take a long range view, like that of Willard C. Wheeler, marketing and business economics consultant for Anderson & Cairns Inc. He says the texitle industry will be at least 70 per cent larger in 1975 than it is today, notwithstanding talk of current over-production. Mr. Wheeler delivered what was probably one of the most complete and graphic projections ever attempted on textiles, an industry that is second only to food in the nation's economy.

The 28-page, 12-graph work traces both graphically and statistically the historic trends of fiber consumption in the light of the rate of the expanding economy in America and in application to the famous "Conkling Method" principles of industrial growth. The extensive research also reviews in detail the pricing trends of various textile fibers, discusses the correlation between price and production volume and plots a trend for the next 20 years.

Seven important conclusions reached in the analysis and poundage consumption trend projections are: (1) Poundage of total fibers consumed by United States mills may be expected to increase by at least 70 per cent by 1975. (2) While the poundage of cotton will increase, its percentage of the total should decline to about 50 per cent. (3) If growers do not prevent it and wool regains its historic percentage position, wool poundage will more than double. Wool will be helped to achieve this growth by scientific advances in blending with both natural and man-made fibers and in shrinkage control and other finishes which will substantially broaden consumer and industrial end-uses. (4) If growers respond to their opportunity, silk can regain at least half of its historic percentage position and reach a volume 15 times as great as today. Blends may plan an important part in this, too. (5) There is no visible reason why rayon and acetate should not maintain and even improve their present percentage position and achieve a poundage 80 per cent greater than today. (6) The other and newer man-made fibers have passed their period of testing, have reached the point of popular demand and are just entering a period of assured dynamic growth. Given the aggressive promotion, which appears to be certain, and adequate capital investment, there is no visible reason why they cannot grow as fast as did rayon and acetate. This would carry them to the percentage position now occupied by rayon and acetate and increase their poundage by eight times. (7) In 1952 mills spent 90 per cent as much for man-made fibers as for cotton. They spent more for rayon and acetate than for wool and almost as much for the newer synthetic fibers as for wool.

The major conclusions reached by Mr. Wheeler in the price trend study indicate that:

> Cotton is no longer the only fiber in the low-priced field and one may run little risk in forecasting that rayon and acetate rather than government action will eventually set the market price for cotton.
>
> The newer synthetics have declined in relative price faster than either rayon or acetate in their first 12 years and there can be little doubt that the long-term direction will continue downward. It is not inconceivable that the man-made fibers, excepting nylon, will work down to the average fiber price level.

There are other votes of confidence in the future also worthy of pointing out. The recent announcement that the Springs Cotton Mills have ordered five million dollars worth of new equipment to be installed in 1954 is an example. Also the announcement by Dan River Mills Inc., Danville, Va., that it plans to spend about $2,500,000 for machinery during the coming year. This is a million dollars more than last year for Dan River.

Such optimism is prevalent in other fields, too. General Motors Corp. has announced through its president, Harlow H. Curtice, that it would spend a billion dollars on plant and equipment in the next 20 months compared with an average of $250 million annually since the war.

That you have to be big to be so bold cannot be denied. Still, these are examples that should be encouraging. It could well be that such expansion programs are premature, but the demand is bound to catch up for at least two reasons. These two reasons—growth of population and technologi-

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cal advance—must not be overlooked. Both are prime considerations in viewing *and* preparing for the future.

It would be hard, if not impossible, to convince some that the textile outlook is much more favorable than in other sectors of industry. But Stanley F. Wagdin, treasurer of Courtaulds Inc., points out that such is the case and explains why. He states that consumer expenditure on apparel has been constant in the post-war years while such durable goods as automobiles, household furniture and equipment and television have taken a sharply increasing share of the consumer dollar. The similar boom in textiles was on a much smaller basis and comparatively shortlived. Thus the transition from a seller's to a buyer's market, now facing other segments of industry, has already been experienced in textiles.

Basing his statements on Federal Reserve Board and U. S. Department of Commerce Indices, Mr. Wagdin goes on to say that figures indicate that textile manufacturers have, on the whole, followed a conservative policy in regard to production versus sales. Manufacturers went ahead of consumer buying in 1950 and early 1951, but Mr. Wagdin sees evidence that the reverse has since been the case. Nor does he believe that inventories of textile mills are too high, as some voice. He points out that the present inventory levels can, in large measure, be regarded as a return to normal after the exceptional conditions of the war and post-war periods.

Pricewise, Mr. Wagdin stated that wholesale prices of apparel and textile products have shown a fairly sharp

TEXTILE INDUSTRY SCHEDULE

— 1954 —

Feb. 25-27 (Th-Sa)—Annual convention, **PHI PSI TEXTILE FRATERNITY**, The Carolina, Pinehurst, N. C.

*Mar. 17-19 (W-F)—**COMMITTEE D-13 ON TEXTILE MATERIALS, A.S.T.M.**, New York City.

Mar. 18-20 (Th-Sa)—Annual convention, **ALABAMA COTTON MFRS. ASSN.**, Hotel Buena Vista, Biloxi, Miss.

‡Mar. 27 (Sa)—**EASTERN CAROLINA DIV., S.T.A.**, North Carolina State College School of Textiles, Raleigh.

*Mar. 27 (Sa)—**SOUTHEASTERN SEC., A.A.T.C.C.**, Ralston Hotel, Columbus, Ga.

Apr. 2 (F)—Spring meeting, **CAROLINAS SEC., AMERICAN SOCIETY FOR QUALITY CONTROL**, Clemson (S. C.) College.

Apr. 2-3 (F-Sa)—Annual convention, **DELTA KAPPA PHI TEXTILE FRATERNITY**, Raleigh, N. C.

Apr. 5-7 (M-W)—Packaging conference, **A.M.A.**, Atlantic City (N. J.) Auditorium.

Apr. 7-9 (W-F)—Annual convention, **COTTON MFRS. ASSN. OF GEORGIA**, Boca Raton (Fla.) Hotel and Club.

†Apr. 10 (Sa)—**PIEDMONT SEC., A.A.T.C.C.**, Hotel Roanoke, Roanoke, Va.

*Apr. 15 (Th p.m.)—**SOUTH CAROLINA DIV., S.T.A.**, Ware Shoals.

Apr. 22-24 (Th-Sa)—Annual convention, **AMERICAN COTTON MFRS. INSTITUTE**, Jung Hotel, New Orleans, La.

*Apr. 24 (Sa)—**NORTHERN NORTH CAROLINA-VIRGINIA DIV., S.T.A.**, White Oak Y.M.C.A., Greensboro, N. C.

Apr. 26-28 (M-W)—Manufacturing conference, **A.M.A.**, Hotel Statler, Cleveland, Ohio.

†Apr. 26-30 (M-F)—**AMERICAN TEXTILE MACHINERY EXHIBITION** (sponsored by American Textile Machinery Assn.), Atlantic City (N. J.) Auditorium.

Apr. 28 (W)—**BRAND NAMES DAY** (sponsored by Brand Names Foundation Inc.)

Apr. 28 (W)—Alumni meeting, **LOWELL TECHNOLOGICAL INSTITUTE**, Haddon Hall, Atlantic City, N. J.

May 4-6 (Tu-Th)—**NORTH CAROLINA STATEWIDE INDUSTRIAL SAFETY CONFERENCE**, Hotel Sir Walter, Raleigh.

May 5-6 (W-Th)—Spring meeting, **THE FIBER SOCIETY** (Institute of Textile Technology as host), Monticello Hotel and Thomas Jefferson Inn, Charlottesville, Va.

*May 8 (Sa)—**PIEDMONT DIV., S.T.A.**, Hickory, N. C.

*May 8 (Sa)—Carding and spinning meeting, **TEXTILE OPERATING EXECUTIVES OF GEORGIA**, A. French Textile School, Georgia Institute of Technology, Atlanta.

May 10-15 (M-Sa)—**NATIONAL COTTON WEEK** (sponsored by National Cotton Council of America).

May 13-15 (Th-Sa)—Annual outing, **CAROLINA YARN ASSN.**, The Carolina, Pinehurst, N. C.

*May 14-15 (F-Sa)—Outing, **SOUTHEASTERN SEC., A.A.T.C.C.**, Radium Springs, Ga.

*May 20-21 (Th-F)—Annual outing, **CHATTANOOGA YARN ASSN.**, Chattanooga (Tenn.) Golf and Country Club.

May 24-26 (M-W)—Insurance conference, **A.M.A.**, Hotel Statler, New York City.

May 27-29 (Th-Sa)—Annual convention, **SOUTH CAROLINA TEXTILE MFRS. ASSN.**, The Cloister, Sea Island, Ga.

June 10-12 (Th-Sa)—Annual convention, **S.T.A.**, Ocean Forest Hotel, Myrtle Beach, S. C.

*June 11 (F)—Reunion and outing, **PHILADELPHIA TEXTILE INSTITUTE ALUMNI ASSN.**, Manufacturers Golf and Country Club, Oreland, Pa.

June 11-12 (F-Sa)—Summer outing, **PIEDMONT SEC., A.A.T.C.C.**, Mayview Manor, Blowing Rock, N. C.

*June 13-18 (Su-F)—Annual meeting, **AMERICAN SOCIETY FOR TESTING MATERIALS** (with concurrent Exhibit of Testing and Scientific Apparatus), Sherman and Morrison Hotels, Chicago, Ill.

June 21-23 (M-W)—General management conference, **AMERICAN MANAGEMENT ASSN.**, Hotel Statler, New York City.

†Sept. 11 (Sa)—Annual meeting, **PIEDMONT SEC., A.A.T.C.C.**, Hotel Barringer, Charlotte, N. C.

Sept. 13-14 (M-Tu)—Fall meeting, **THE FIBER SOCIETY** (Textile Technical Federation of Canada and Canadian Assn. of Textile Colourists and Chemists as hosts), McGill University, Montreal, Que., Canada.

Sept. 15-18 (W-Sa)—National convention, **A.A.T.C.C.**, Atlanta (Ga.) Biltmore Hotel.

*Sept. 23-24 (Th-F)—Annual meeting, **COMBED YARN SPINNERS ASSN.** Grove Park Inn, Asheville, N. C.

Sept. 28-30 (Tu-Th)—**INDUSTRIAL PACKAGING AND MATERIALS HANDLING EXPOSITION**: concurrent short course Sept. 27-30 and competition Sept. 28-30 (sponsored by Society of Industrial Packaging and Materials Handling Engineers), Chicago (Ill.) Coliseum.

Oct. 4-8 (M-F)—**SOUTHERN TEXTILE EXPOSITION**, Textile Hall, Greenville, S. C.

Oct. 12-15 (Tu-F)—**NATIONAL CHEMICAL EXPOSITION** (sponsored by American Chemical Society), Chicago (Ill.) Coliseum.

*Oct. 14-15 (Th-F)—Convention, **THE QUARTERMASTER ASSN.**, Sheraton-Plaza Hotel, Boston, Mass.

Oct. 14-15 (Th-F)—Annual meeting, **NORTH CAROLINA TEXTILE MFRS. ASSN.**, The Carolina, Pinehurst, N. C.

*Dec. 11 (Sa)—**SOUTHEASTERN SEC., A.A.T.C.C.**, Atlanta Biltmore Hotel, Atlanta, Ga.

— 1955 —

*Jan. 24-27 (M-Th)—**PLANT MAINTENANCE & ENGINEERING SHOW**, International Amphitheatre, and **CONFERENCE**, Conrad Hilton Hotel, Chicago, Ill.

Mar. 31-Apr. 2 (Th-Sa)—Annual meeting, **AMERICAN COTTON MFRS. INSTITUTE**, Palm Beach (Fla.) Biltmore Hotel.

June 16-18 (Th-Sa)—Annual convention, **SOUTHERN TEXTILE ASSN.**, Mayview Manor and Green Park Hotel, Blowing Rock, N. C.

Sept. 21-23 (W-F)—National convention, **A.A.T.C.C.**, Chalfonte-Haddon Hall, Atlantic City, N. J.

— 1956 —

*Sept. 10-12 (M-W)—National convention, **AMERICAN ASSN. OF TEXTILE CHEMISTS AND COLORISTS**, Waldorf-Astoria Hotel, New York City.

Listed for the first time this month. ***‡Tentative listing.*** ***†Changed or corrected from previous issue.***

(M) Monday; (Tu) Tuesday; (W) Wednesday; (Th) Thursday; (F) Friday; (Sa) Saturday; (Su) Sunday

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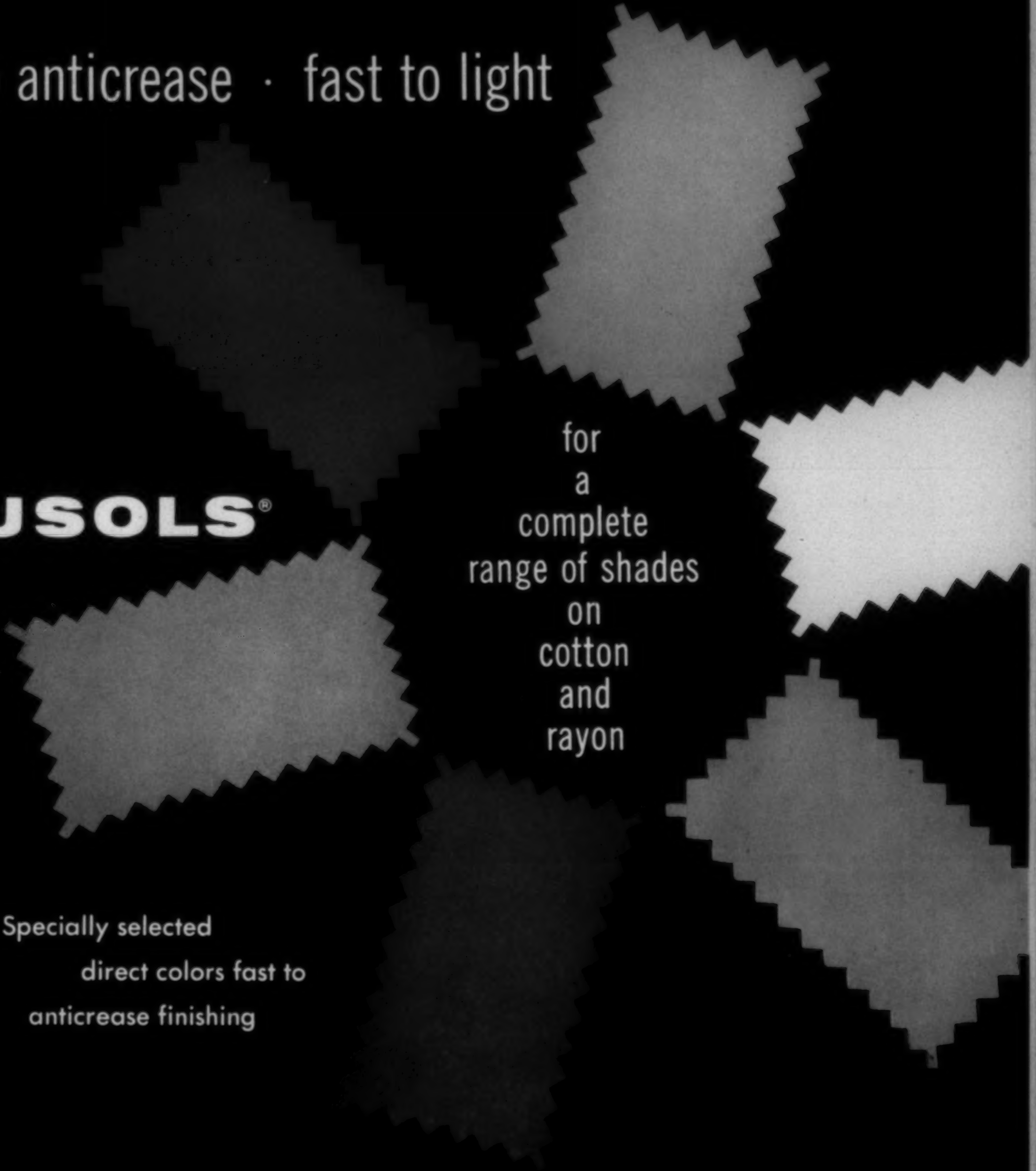

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decline in the last two years and that this has not yet been reflected to any significant extent in retail prices. He believes that when there is a corresponding drop in retail prices, it will serve to stimulate sales.

There may be still more encouragement from the proposal by President Eisenhower in his budget message to allow greater freedom in depreciation rates for property and equipment. His proposal, already approved by the House Ways and Means Committee, would provide greater assurance of recovering the cost of new capital investment. His recommendation follows:

> A liberalization of the tax treatment of depreciation would have far-reaching effects on all business and be especially helpful in the expansion of small business whether conducted as individual proprietorships, partnerships, or corporations. At present, buildings, equipment, and machinery are usually written off uniformly over their estimated useful lives.
>
> The deductions allowed, especially in the early years, are often below the actual depreciation. This discourages long-range investment on which the risks cannot be clearly foreseen. It discourages the early replacement of old equipment with new and improved equipment. And it makes it more difficult to secure financing for capital investment, particularly for small business organizations.
>
> I recommend that the tax treatment of depreciation be substantially changed to reduce these restrictions on new investment, which provides a basis for economic growth, increased production, and improved standards of living. It will help the manufacturer in buying new machinery and the storekeeper in expanding and modernizing his establishment. It will help the farmer to get new equipment. All of this means many more jobs.
>
> Specifically, I recommend that business be allowed more freedom in using straight-line depreciation and in selecting other methods of depreciation. Larger depreciation charges should be allowed in the early years of life of property by the use of the declining-balance method of depreciation at rates double those permitted under the straight-line method. Other methods which give larger depreciation in early years should be accepted, so long as they do not produce deductions which exceed those available under the declining-balance method.

So, what is this the time for?

It's The Climate That Counts

During the first week of this month the American Federation of Labor held its annual convention at Miami Beach, Fla. The Southern sun in the middle of Winter is a nice thing. But the locale of this convention did seem a little incongruous when one story coming from the meeting had to do with the labor organization declaring all-out war on what it calls "runaway" industries.

It was the same old tune—manufacturing plants located in New England which have transferred, are in process of transferring, or are considering the transfer of their operations to Southern states, in the A.F.L. way of thinking, are just plain horrible.

Lower wage rates available in the South usually are cited as the reason for such transfer of manufacturing operations. The unions have a stable of well-paid economists, but apparently the only kind of economics they are capable of dealing with are those based on sociological attitudes. No mention is made of the real economics in the whole business: to survive, a manufacturing plant must be competitive. Survival, as far as the so-called "runaway" plants are concerned, hinges upon being able to turn out products which move in a given market.

It is not making an admission when it is said that wage rates (in textiles, for instance) are lower in the South than in the North; one of the laws of economics is that wage rates are patterned after community conditions. But more important is the factor of productivity by individual workers; let it be said without further comparison that in the South a worker hustles, goes home after his shift with a proud feeling that he has given his employer a decent day's work.

Another factor cited as the reason for "runaway" plants running away is unionization, or the lack thereof in the South. There is no point in ducking that one, either; labor unions, particularly in textiles, have had a notable history of failure in Southern states. A New England mill executive, beset for years by the devious dealings of shop committees and professional union hirelings, might be a little less than human if he is not tempted by the idea of a non-union plant. If he reads the papers, he can acquire the further idea that the average Southern worker wants no truck with labor unions. For instance—

On Feb. 10, the workers at Plant No. 8 of Erwin Mills Inc., Stonewall, Miss., ousted the Textile Workers Union of America (C.I.O.) as their bargaining agent by a vote of 402 to 258; there were seven challenged ballots and three void ballots.

On Jan. 21, employees of the Standard-Coosa-Thatcher Co. plant at Piedmont, Ala., rejected the T.W.U.A. by a vote of 549 to 220, with 25 ballots challenged by the union and five void ballots.

Within the past several weeks, employees of the nylon plant of E. I. du Pont de Nemours & Co. at Chattanooga, Tenn., voted to retain their own local organization, Chattanooga Nylon Employees Council Corp., as their bargaining agent—turning down the bid of an A.F.L. affiliate.

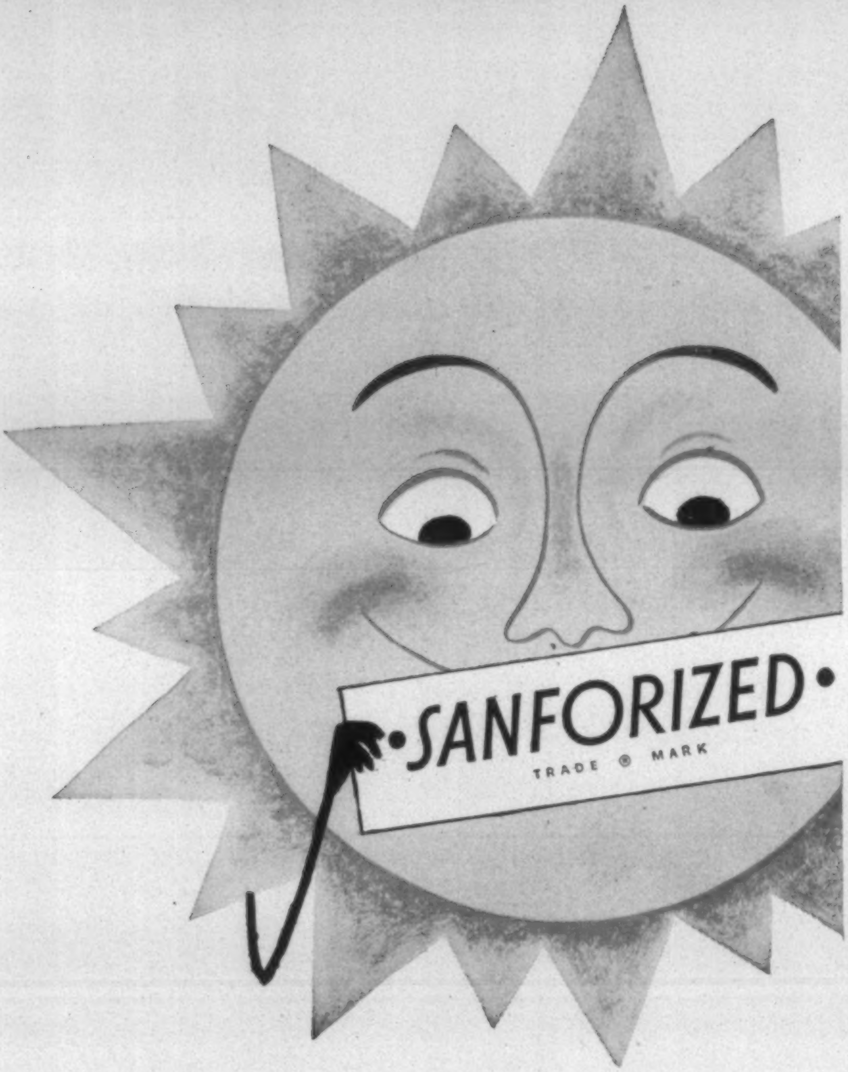
Financing Modernization

The desirability, and necessity, of mill modernization has often been discussed in these columns. One question left unanswered in the discussion was the means of financing major purchases of new machinery and equipment.

Comes now a discussion of financing from S. D. Maddock, president of C.I.T. Corp., who is in the business of lending money. "When the decision is made to replace old machinery or to expand or modernize facilities and equipment," says Mr. Maddock, "it is important that management decide how to finance the program without impairing working capital. When a program is considered which would strain current funds, the practical answer to the problem is to use outside capital which can be repaid over a period of time. The most desirable solution is a funding plan which would leave working capital liquid and permit machinery to pay for itself out of increased earning capacity."

In general, Mr. Maddock says, industry has available three sources of credit: a short-term bank loan, limited credit from several machinery and equipment makers, and a term-loan from an industrial financing company. "Usually," he says, "the first source is used for short-term working capital loans rather than equipment loans. The second source, credit from manufacturers or distributors, is generally used when equipment purchases are made in limited amounts. For major expenditures, the best arrangement is an equipment-funding loan from a firm which specializes in industry financing. Terms can be geared to the borrower's income and tailored precisely to his needs."

The sun never sets on . . .



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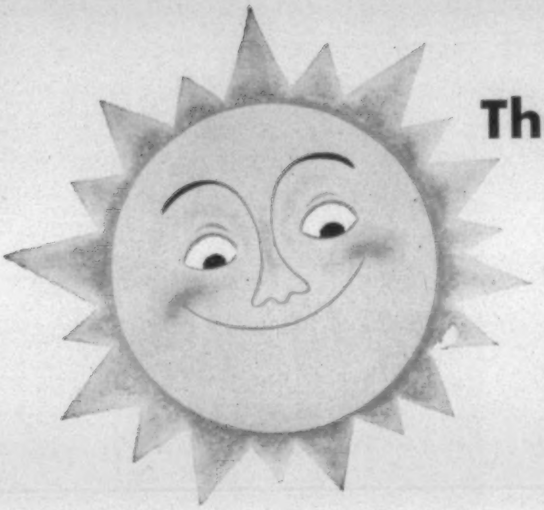

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COTONIFICIO RODOLFO CRESPI, S.A	Sao Paulo
CIA. JAUENSE DE FIACAO S.A	Sao Paulo
S. A. INDUSTRIAS REUNIDAS F. MATARAZZO	Sao Paulo
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ETABLISSEMENTS RICHARD FRERES	Cholet
ETABLISSEMENTS GAILLIARD & CIE	Barentin
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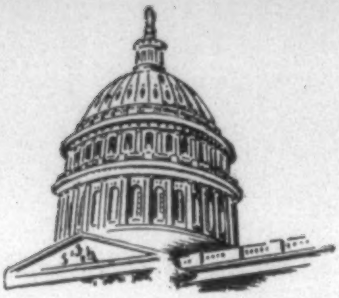

WATCHING WASHINGTON

[Exclusive and Timely News from the Nation's Capital]

Veteran Senator George told the Senate the President will have great difficulty in explaining to the country why he wants power to override state laws and constitutions. Speaking in behalf of his substitute for the Bricker amendment, George said he doubted if the President understood it, and referred to frequent charges he had been misled as to what the amendment means. George said Congress had better limit one-man executive agreements that override laws and constitution, or close up shop.

Resistance of radicals and internationalists to the Bricker amendment produced a legislative involvement fully equal to the clash on the League of Nations treaty. Senator Hennings (D., Mo.) tried to contend the Bricker amendment would only take powers from the states and give them to the Federal Government. Senator George said this was not true, and asserted the power to upset rights of states and individuals through agreements that do not need to be ratified by the Senate is an intolerable assumption.

The Bricker and George amendments alike are an effort to put a legal curb on the assertion of "inherent rights" in the President above the Constitution. It was presented soon after the steel seizure case and has met the strongest resistance that has probably been offered to a proposed change in the Constitution.

The U. N. has gone a step further toward forcing F.E.P.C. on this country without consent or sanction of Congress. It has adopted a resolution for "special protection of minority groups" which was presented by the Human Rights Commission. The proposal calls for an "expert" to go around looking for abuses by his own interpretation, and reporting them to the U. N. for action. Apparently U. N. action would be supreme, even above that of Congress.

Southern and Western political leaders feel the President has made a grievous mistake in lining up with radicals and the State Department crowd to defeat the Bricker amendment. The issue, said Bricker, is this: Shall we permit treaties to destroy sovereignty and the Constitution? He said most of the opposition comes from those who "yearn for the domination of a supranational government."

Unalterable opposition to the amendment was expressed by the President. He said it would make government as impotent to handle foreign relations as were the 13 colonies. Bricker said the claim is "absurd," and the President misled by a "smoke screen thrown up by one-world groups."

Leaders in House labor legislation are standing firm against passing a labor law revision bill and sending it to the Senate to be ripped and gutted. This has invariably happened in the past; with the Senate Labor Committee strongly controlled by the unions, it has been the custom to wait for a House-passed bill to come over, and to either rip it to pieces or put it in a pigeon hole.

The firm stand of House leaders against Senate mutilation, and writing pretty much what union bosses want, makes revision in this session extremely

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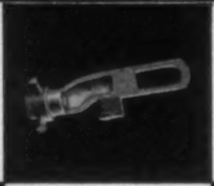

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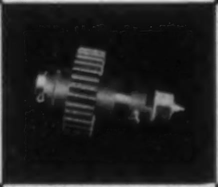

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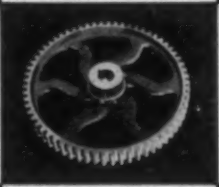

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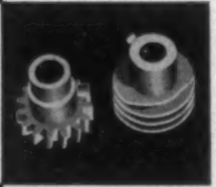

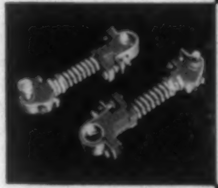

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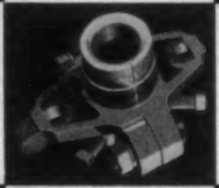

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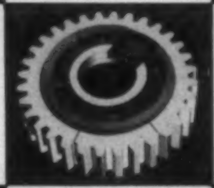

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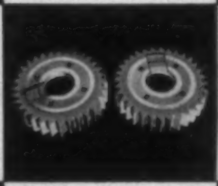

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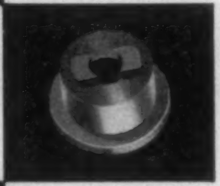

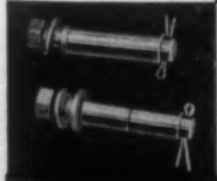

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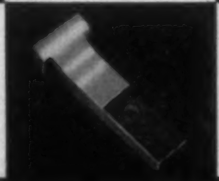

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unlikely. The big unions are putting strong pressure on top House leaders to bring out revision to the Taft-Hartley Law, pass it, and send it to the Senate. They are getting little encouragement, for their testimony before the Senate Labor Committee reveals what they really have in mind.

Obstinacy of the House leaders against giving the Senate's "hatchet men" a chance to carve up another labor bill may postpone revision of the Taft-Hartley Law for four or five years. They intend to deal with such outstanding problems as jurisdictional strikes, and workers forced into long idleness through inter-union quarrels, and arbitrary picket lines thrown up. This is what the union bosses do not want in the law.

The House Labor Committee feels the country does not have a union of consumers to protect themselves from costs and losses of strikes. While unions talk about higher wages and added purchasing power, the committee finds these things only raise prices and do not increase purchasing power. Several members think the machinery for orderly adjustment and strike prevention should be tightened.

Mr. Eisenhower's regime is heavily weighted down in "deep-seated anti-union prejudice," C.I.O.'s Reuther told the Senate Labor Committee. It has "defaulted" on a campaign promise, he said, to "bring justice and fairness into the Taft-Hartley Law," and labor's grievances have not been "redressed." What the President proposes, he said, would make the law "worse than it is."

John L. Lewis' two welfare funds for hard and soft coal miners are in serious trouble, with pension cut-backs up to one-half. The cause is declining income. The Lewis take of 40 cents a ton on soft coal, and 50 cents a ton on hard coal, has put a burden on union-mined coal, so that now about one-third of the soft coal output is non-union. Hard coal is hit much harder.

As the Lewis pension payments have scaled down, Lewis has devised a new scheme to keep them going. This is to put the pensioners also on public relief, or let the government make up the difference of the cuts. The Lewis levy is adding 15 per cent, or more, to mine payrolls, but the government's outlay would probably be much higher. Lewis has been called the country's "greatest oil and gas salesman."

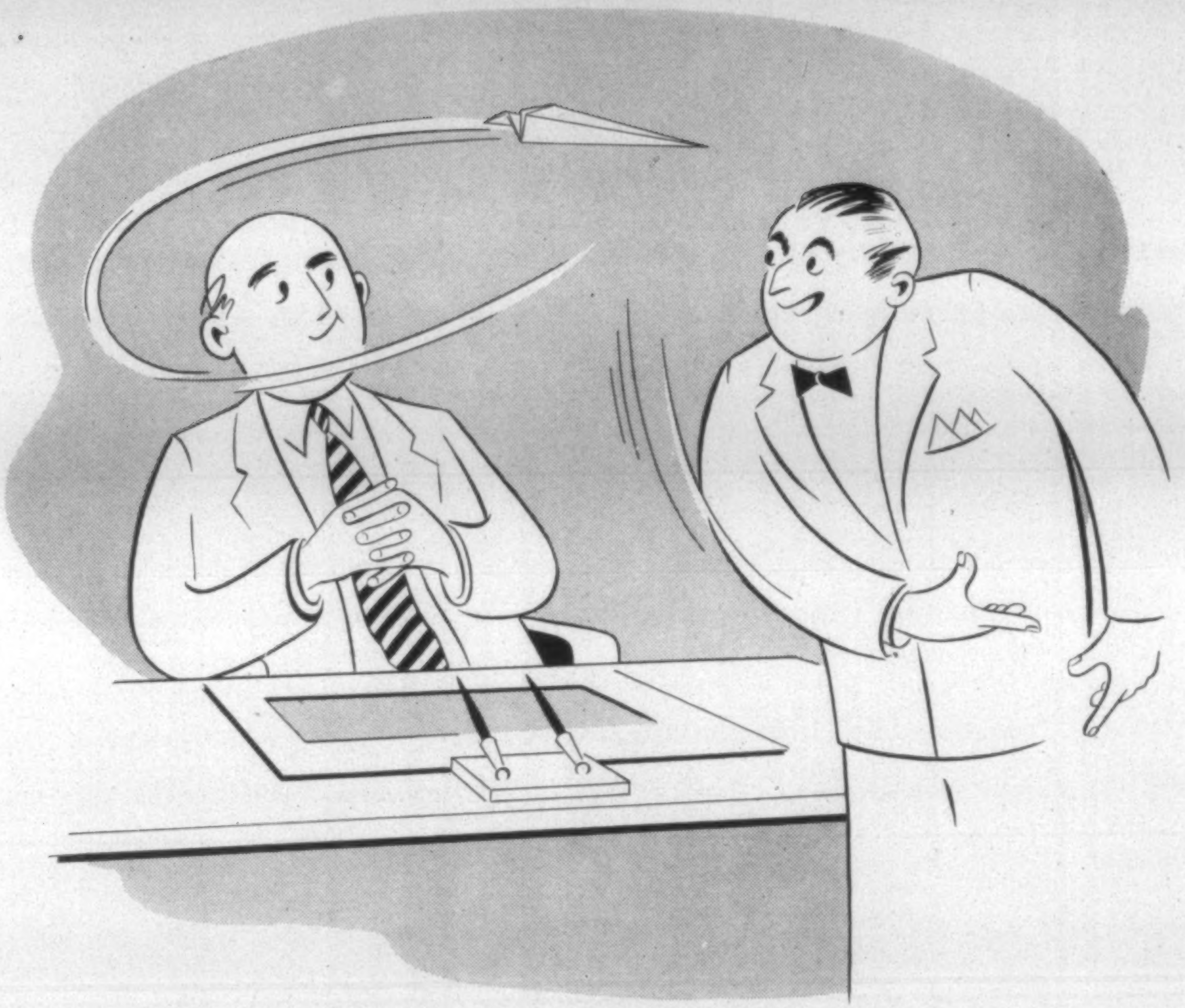
Few problems in labor relations are more vital now than in protecting employees' welfare funds that are in union hands, Joseph Moody told the committee. He is president of the Southern Coal Producers.

Mr. Moody said that while pension benefits for miners are being cut, Lewis is offering "unlimited financial aid to the racket-ridden East Coast dockworkers' union." This welfare fund, he said has gone on the rocks for the second time, and now "it is apparent miners and their families have no assurance of continuing aid or pensions."

The absence of a reserve fund, said Mr. Moody, puts the pension plan at the mercy of every fluctuation in coal production. When output is high, money comes in a flood, and benefits are expanded; then come months of contraction when the need for payments is greatest. He said these welfare funds, wherever imprudently managed, hold a serious national problem.

Major A.F.L. unions have lined up against more investigation of the condition of their welfare funds. Evidence produced by the Smith-Hoffman Committee in Detroit, St. Louis, Kansas City, and elsewhere, shows the funds to be a pawn in the hands of union bosses, with no vested rights to union members.

The Supreme Court, in a 7 to 2 decision, ruled that labor unions commit an unfair labor practice when causing employers to discriminate against union



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employees who break union rules. The decision upheld a ruling of N.L.R.B. against the A.F.L.

In a like 7 to 2 decision, the Supreme Court reversed a Court of Appeals ruling in St. Louis upholding an action that gave pay increases and vacations only to union member employees. The teamsters union was involved, and was the bargaining agent for all employees, union and non-union. But it negotiated benefits to apply only to its own union members.

Jurisdictional warfare is raging through the ranks of A.F.L. unions at the highest point in many years. The two biggest unions—carpenters and teamsters—are locked in a finish fight over jurisdiction. The carpenters charge Dave Beck's teamsters are stealing members and job assignments through raids in violation of A.F.L. rules. Beck has refused to be bound by any pact with other unions.

George Meany and his group in the A.F.L. Council are trying to form a defensive alliance to check the raids of Beck and his union. They propose a five-man "labor court" to decide the jurisdictional rows being stirred up, mostly by Beck's union, with no appeal from its decisions. Beck is charged with telling other unions what jobs his members will handle, and calling jurisdictional strikes, with picket lines, if they refuse to acquiesce.

Union bosses are angry over the President's failure to support a minimum wage of $1 an hour. The President's position is that the existing minimum of 75 cents should stand during the transition from the war economy. The Administration view is that a higher floor would pour in another load of inflation, and set off another round of demands for wage increase.

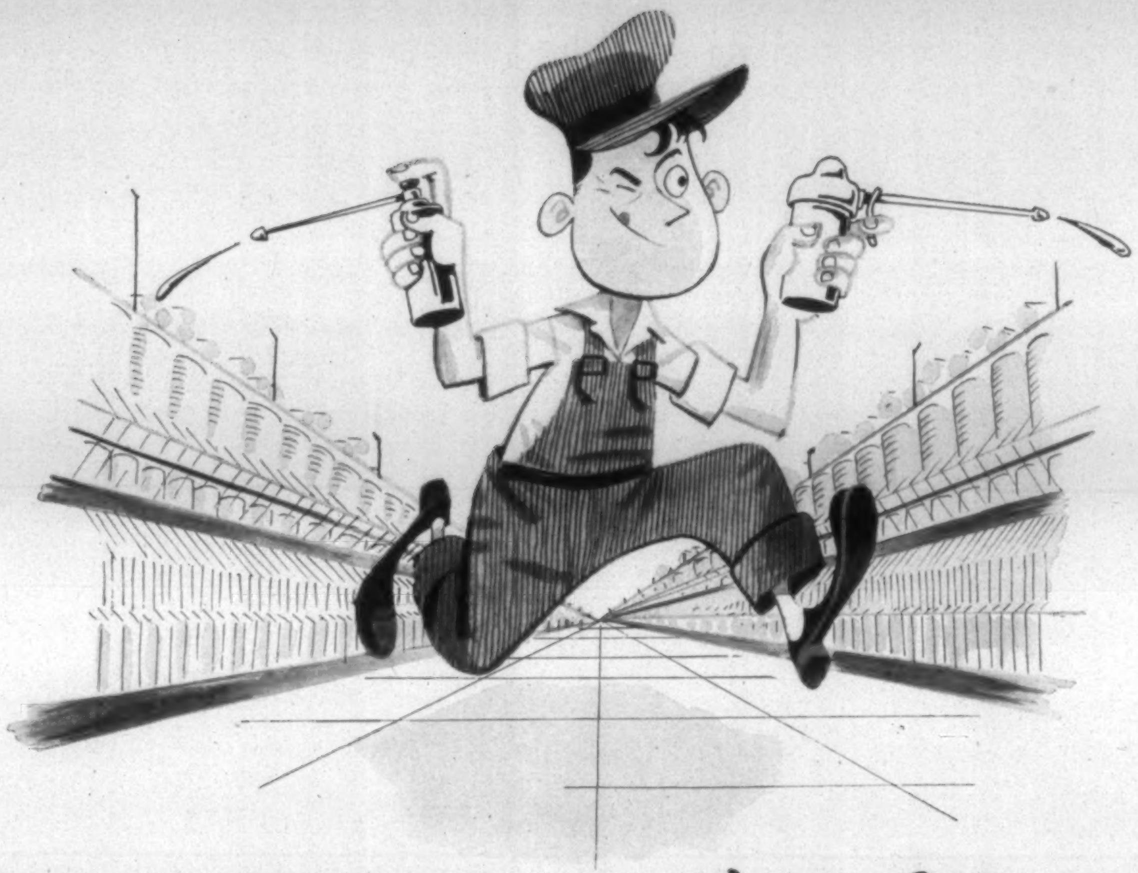
Unions are fighting hard to maintain the bias of N.L.R.B. in their favor, and checkmate a full reorganization. N.L.R.B. has been a handy weapon of the unions in bludgeoning employers, and in bringing government in on their side in controversies, aggressions and strike demands. Prospect of the loss of this "ally," through a fair and impartial board, is a hard blow when the key to the back door of the White House is lost, too.

Almost every day now some New Deal member of Congress or union leader is saying that recession, or worse, is just around the corner. They want the economy juiced up at the taxpayers' expense, and are sure the President is sending the country to the bow-wows. They want some kind of panacea pumped into the economy, but whether price controls, wage boosts, or some other shot in the arm, they are not sure.

The President is asking for "a steady, unshakable attitude of public confidence" while the country goes through transition from war to peace. He flatly rejected the proposal of Walter Reuther for an "unemployment conference," and said he does not see serious interference ahead in national growth, and steady improvement in employment and living standards.

The mood of Congress is to wholly eliminate foreign economic aid, but because of past "authorizations" it may not be able to wholly do so. There is an unexpended balance of $18 billion. Next July this balance will be $7.5 billion, of which the President proposes to use $3.6 billion in the following year. New military aid of only $2.5 billion is asked, with another sum of $1 billion for economic aid.

Senator Byrd is leading the opposition to raising the debt limit beyond the present maximum of $275 billion. The latest estimate is the Treasury will have a cash balance of $6.2 billion on next July 1, and a borrowing margin under the limit of another $3.7 billion, with the debt at that time standing at $271.3 billion. Byrd says this is enough for Treasury "elbow room."



LUBRICATING—or Just Oiling?

The above cartoon is not meant to infer that your oilers are doing a hit or miss job, but to remind you that your lubrication progress may not be keeping pace with your technological progress.

The first step in lubrication progress is planned lubrication. This means proper application of the right kind and amount of a lubricant at the right time.

Gulf Sales Engineers, working hand-in-hand with your personnel, will suggest a method of planned lubrication for every room in your mill.

Planned lubrication can give added life and improved performance to your machines. It can cut power consumption and part replacements, as well as halt rust and corrosion.

Use the chart below as a guide in determining whether your mill utilizes sound lubrication practices. If not, call in a Gulf Sales Engineer. He is trained in petroleum technology and has a thorough knowledge of textile machinery operation. He will help you reap the benefits of planned lubrication.

LUBRICATION CHECK CHART

Do you utilize these sound lubrication practices?

YES	NO	
☐	☐	Trained lubrication personnel
☐	☐	Right lubricant for the job
☐	☐	Proper application of the lubricant
☐	☐	Definite lubrication schedule
☐	☐	Proper storage and handling

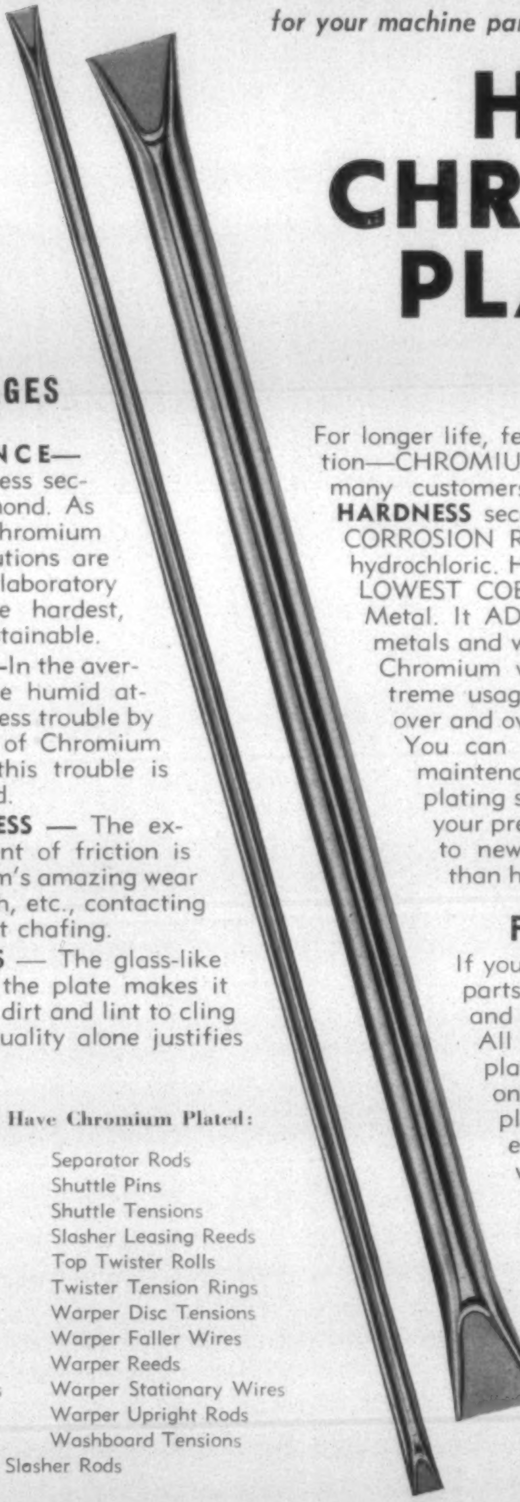
GULF INDUSTRIAL LUBRICATION

Gulf Oil Corporation
Gulf Refining Company
GULF BUILDING, PITTSBURGH, PA.

ENDURING PROTECTION

for your machine parts against wear and rust with

HARD CHROMIUM PLATING



CONSIDER THESE ADVANTAGES

WEAR RESISTANCE—Chromium has hardness second only to the diamond. As licensees of United Chromium Corporation, our solutions are under their strict laboratory control, insuring the hardest, satin-smooth plate obtainable.

RUST RESISTANCE—In the average mill or plant the humid atmosphere causes endless trouble by corrosion. The value of Chromium plate cutting down this trouble is universally recognized.

VELVET SMOOTHNESS — The extremely low coefficient of friction is the secret of chromium's amazing wear resistance. Yarn, cloth, etc., contacting it glide gently without chafing.

CLEANER SURFACES — The glass-like super-smoothness of the plate makes it almost impossible for dirt and lint to cling to it. Ofttimes this quality alone justifies its use.

Some of the Parts We Have Chromium Plated:

All Metal Reeds
Anti-Wear Tensions
Comber Reeds
Crossing Reeds
Expansion Comb Panels
Feed Rolls
Immersion Rolls
Ladder Tensions
Lease Rods
Machine Tools of All Kinds
Printing Rolls
Quiller Tension Discs
Separator Rods
Shuttle Pins
Shuttle Tensions
Slasher Leasing Reeds
Top Twister Rolls
Twister Tension Rings
Warper Disc Tensions
Warper Faller Wires
Warper Reeds
Warper Stationary Wires
Warper Upright Rods
Washboard Tensions
Bust and Slasher Rods

For longer life, fewer replacements, better production—CHROMIUM PLATING is the answer, as our many customers will tell you. Chromium has **HARDNESS** second only to the diamond. It has CORROSION RESISTANCE to all acids, except hydrochloric. Heat Resistance up to 2930 F., the LOWEST COEFFICIENT of FRICTION of any Metal. It ADHERES tenaciously to most base metals and when it comes to REPLACEMENT, Chromium when marred or worn under extreme usage, can be renewed and replaced over and over again.

You can dispose of many operating and maintenance problems with GREENSBORO plating service—you can salvage much of your present equipment and bring it back to new-equipment performance at less than half the original expense.

FREE OF CHARGE

If you will send us six or a dozen small parts we shall gladly chromium plate and return them to you free of charge. All we ask is that you examine the plated parts carefully and test them on your own machines. This will place you under no obligation whatever, but we know you will be convinced of the quality of our work and the savings you will realize from this process.

We are Licensees
of United Chromium
Corporation.

We Also Manufacture Finest Quality Loom Reeds and Expansion Combs

Greensboro Loom Reed Company, Inc.
Greensboro, N. C.

"HOLYOKE"
CALENDER
ROLLS

Established
1863

HOLYOKE MACHINE COMPANY

CALENDER ROLLS for the PAPER and TEXTILE INDUSTRIES
WATER FILTRATION EQUIPMENT
HOLYOKE, MASSACHUSETTS

News about the

A QUESTION frequently asked of themselves by Southern mill men is "I am planning to go to the American Textile Machinery Exhibition in Atlantic City the last week of April, but where shall I stay while I'm up there?" The answer to that question is not complicated, and the solution to such a problem is quite simple.

Reproduced herewith is an official application for hotel accommodations which can be completed and mailed to Housing Bureau, 16 Central Pier, Atlantic City, N. J. Also shown is a map of the Atlantic City boardwalk area giving the location of various hotels, along with a list of the hotels and their rates per day. In most cases the rate quoted is for American Plan (without meals). All of the Atlantic City hotels have more than adequate dining rooms, and a restaurant will be in operation on the second level of

AMERICAN TEXTILE MACHINERY EXHIBITION

APRIL 26 thru 30, 1954

ATLANTIC CITY AUDITORIUM — ATLANTIC CITY, N. J.

AUSPICES
AMERICAN TEXTILE MACHINERY ASSOCIATION

APPLICATION FOR HOTEL ACCOMMODATIONS

→ **NOTE:—Single rooms are limited in number. Please arrange to occupy twin-bedded rooms.**

HOUSING BUREAU
16 Central Pier
Atlantic City, N. J.

Please reserve the following: (See reverse side for list of Hotel Room Rates)

Hotel .... First Choice Hotel .... Fourth Choice
Hotel .... Second Choice Hotel .... Fifth Choice
Hotel .... Third Choice Hotel .... Sixth Choice

.... Room(s) with bath for .... person(s). Rate $ .... to $ .... per room
.... Room(s) with bath for .... person(s). Rate $ .... to $ .... per room
.... Combination (2 rooms with one bath) for .... person(s). Rate $ .... to $ .... per room
.... Room(s) and Parlor for .... person(s). Rate $ ....
.... Room(s) without bath for .... person(s). Rate $ .... to $ .... per room.

Arriving Atlantic City ...., hour .... A. M. / P. M. Leaving ....

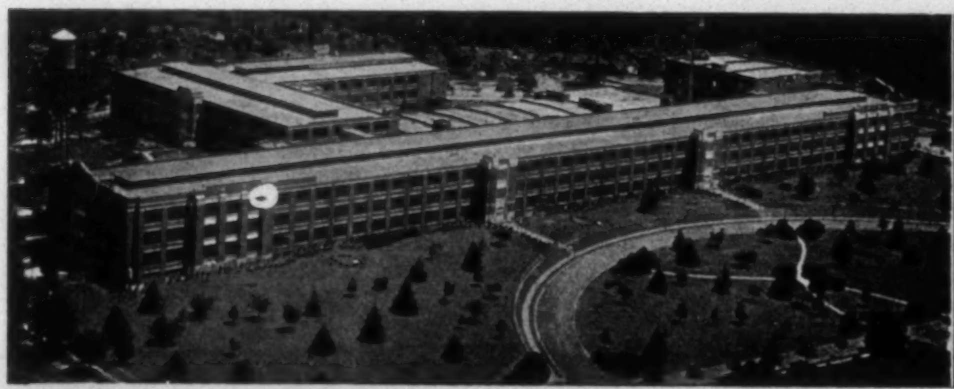
Rooms will be occupied by:

Name	Company or Business	City	State

(Please Attach List of Additional Names, If Necessary)

Name ....
Company ....
Street Address ....
City .... Zone .... State ....

NOTE:—You will receive confirmation direct from the hotel accepting the reservation when made.



HIGH QUALITY COMBED and CARDED KNITTING and WEAVING YARNS

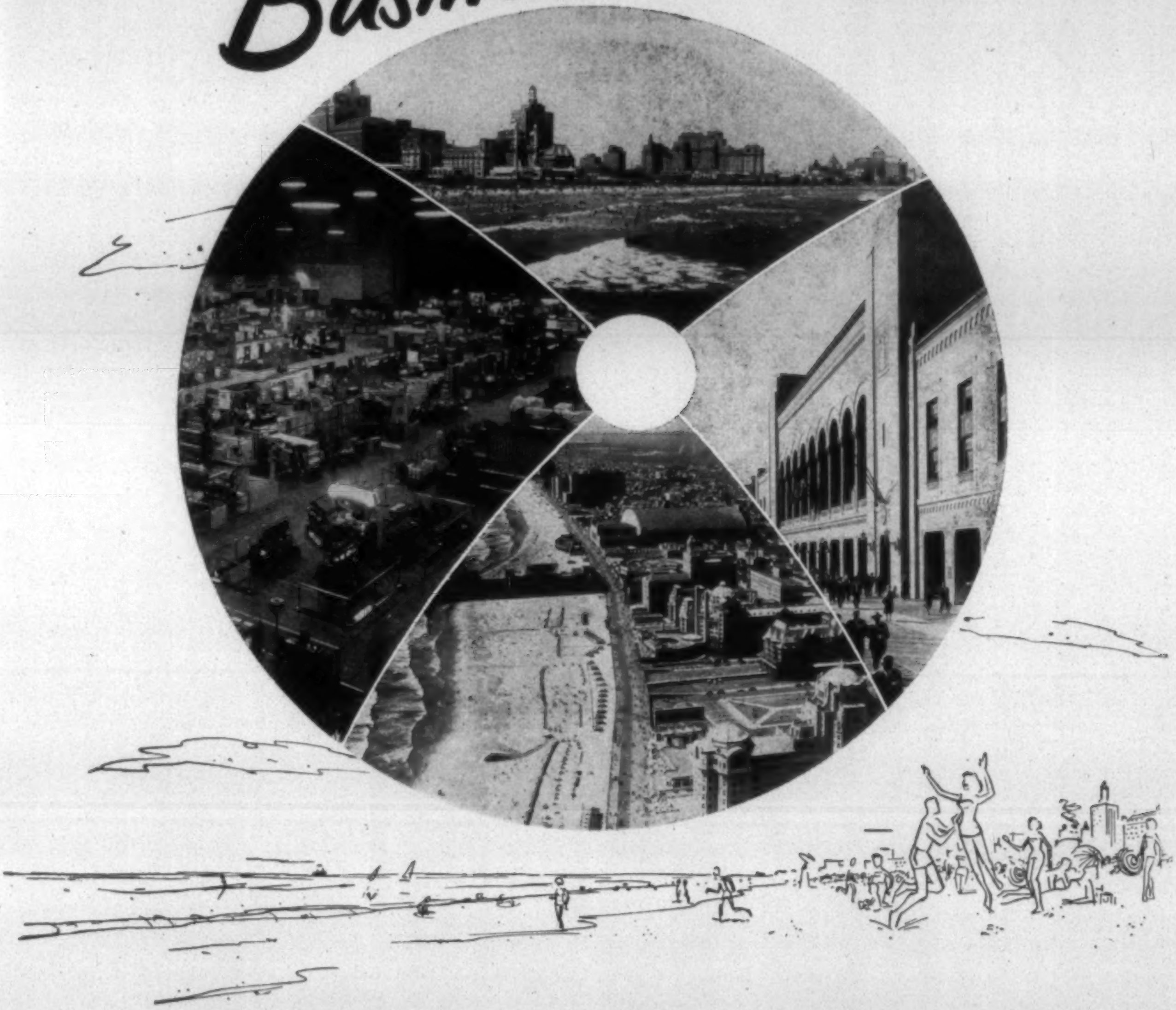
BEAMS, CONES TUBES, WARPS

MARTHA MILLS DIVISION, Silvertown, Georgia

LARGE PRODUCTION . . . UNIFORM QUALITY . . . LATEST MACHINERY

● SOUTHERN SALES AGENTS: **Walter T. Forbes Co.** PHONE 7-9591, CHATTANOOGA, TENN.

MAKE *Business* A PLEASURE!



- - - and it will be a pleasure to do business in Atlantic City. Fine restaurants, fabulous hotels, and the famous Boardwalk, adjoin the Atlantic City Auditorium. In this world-famous Exhibition Hall is being staged the 1954 American Textile Machinery Exhibition. In such a setting, this largest and most complete display of Textile Mill Machinery ever planned, will surely make your visit not only pleasant but profitable.

Combine business with pleasure — keep abreast of progress in the Industry — plan now to attend the American Textile Machinery Association Exhibition April 26 - 30, 1954 and see the most modern in Textile Mill Machinery actually in operation.

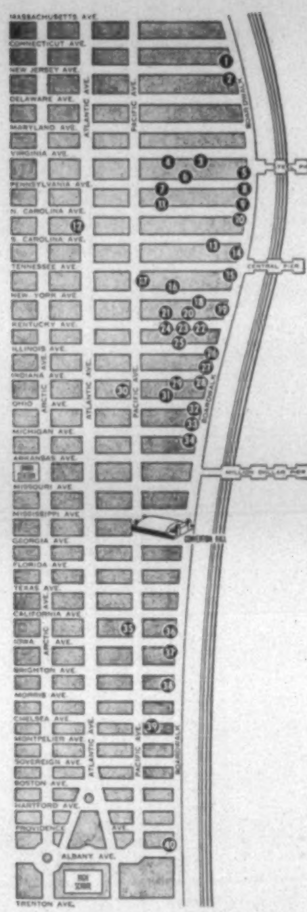
Make your hotel reservations early through The Housing Secretary
16 Central Pier
Atlantic City, New Jersey

TEXTILE MACHINERY
AMERICAN
ATLANTIC CITY
APRIL 26-30
1954
ASSOCIATION
EXHIBITION

American Textile Machinery Association Exhibition

APRIL 26-30, 1954, ATLANTIC CITY, NEW JERSEY

For additional details on the Exhibition itself write A. T. M. A. Press Bureau
Route 4 — Box 61
Vienna, Virginia



Atlantic City's streets are 13 blocks to the mile instead of the usual 8

HOTEL RATES – April 26 thru 30, 1954

AMERICAN TEXTILE MACHINERY EXHIBITION

ATLANTIC CITY AUDITORIUM — ATLANTIC CITY, N. J.

AUSPICES

AMERICAN TEXTILE MACHINERY ASSOCIATION

BOARDWALK HOTELS

Key No. HOTELS	Total Rooms	Rooms with Bath Single	Rooms with Bath Double	Two Rooms — One Bath 2 Persons	Two Rooms — One Bath 3 Persons	Two Rooms — One Bath 4 Persons	Room with Parlor Single	Room with Parlor Double
37—Ambassador	670	6.00 - 14.00	8.00 - 18.00					20.00 - 36.00
1—Breakers	475	5.00 - 9.00	7.00 - 14.00		10.00 - 18.00	12.00 - 21.00		
27—Brighton	291	6.00 - 10.00	8.00 - 14.00		18.00	22.00		18.00 - 28.00
9-10—Chalfonte-Haddon Hall	1000	6.00 - 20.00	9.00 - 22.00					24.00 - 42.00
38—Chelsea	400	5.00 - 11.00	7.00 - 16.00		12.00	15.00 - 18.00		24.00 - 30.00
28—Claridge	400	7.00 - 15.00	11.00 - 19.00					36.00
33—Dennis	475	6.00 - 12.00	9.00 - 20.00		15.00 - 18.00	22.00 - 26.00		27.00 - 34.00
32—Marlborough-Blenheim	464	6.00 - 9.00	9.00 - 18.00	15.00 - 17.00	15.00 - 19.00	17.00 - 22.00		27.00 - 36.00
15—Mayflower	280	6.00 - 11.00	8.00 - 14.00		13.00 - 17.00	16.00 - 20.00		
14—New Belmont	100	4.00 - 5.00	6.00 - 10.00		12.00 - 14.00	13.00 - 16.00		
40—President	500	5.00 - 10.00	8.00 - 18.00					19.00 - 24.00
36—Ritz-Carlton	431	6.00 - 8.00	8.00 - 16.00			20.00		25.00 - 35.00
5—Seaside	235	6.00 - 11.00	8.00 - 14.00					28.00
34—Shelburne	300	6.00 - 16.00	9.00 - 18.00					39.00 - 50.00
26—Traymore	600	6.00 - 14.00	8.00 - 18.00					20.00 - 45.00

AVENUE HOTELS

Key No. HOTELS	Total Rooms	Rooms with Bath Single	Rooms with Bath Double	Two Rooms — One Bath 2 Persons	Two Rooms — One Bath 3 Persons	Two Rooms — One Bath 4 Persons	Rooms without Bath Single	Rooms without Bath Double
21—Boscobel	120	3.00 - 4.00	6.00 - 7.00		9.00	10.00 - 12.00	2.00 - 2.50	3.50 - 4.00
11A—Carolina Crest★	75	5.00 - 7.00	7.00 - 10.00					
4—Clarendon	100	5.00 - 6.00	7.00			12.00	3.50	5.00
7—Colton Manor	208	7.00 - 10.00	9.00 - 14.00	12.00	15.00	18.00		
17—Columbus	100		6.00 - 8.00			12.00 - 16.00		5.00 - 6.00
29—Crillon★	49		8.00 - 10.00					
30—Eastbourne	100	5.00 - 8.00	7.00 - 10.00	10.00 - 12.00	12.00 - 14.00	14.00 - 16.00	3.00 - 4.00	5.00 - 6.00
16—Flanders	125	5.00 - 6.00	7.00 - 10.00			16.00	4.00	6.00
35—Fox Manor★	60	5.00 - 8.00	6.00 - 12.00	8.00 - 10.00	10.00 - 15.00	12.00 - 20.00	4.00 - 6.00	5.00 - 8.00
6—Holmhurst	100		7.00 - 8.00			14.00	3.00	4.00
23—Jefferson	150	5.50 - 8.00	7.00 - 10.00			12.00 - 20.00		4.00 - 6.00
24—Kentucky	110	3.50	6.00 - 7.00	7.00	10.00	10.00 - 12.00	2.00 - 2.50	4.00 - 5.00
11—Lafayette	215	5.00 - 8.00	8.00 - 14.00	10.00 - 12.00		16.00 - 20.00	Parlor & 1 Double & Bath	18.00 - 30.00
18—Lexington	100	5.00	6.50 - 8.50	9.00	11.00	12.00 - 14.00	3.00 - 4.00	4.50 - 6.50
25—Madison	210	6.00 - 8.00	7.00 - 12.00		12.00 - 16.00	14.00 - 20.00	4.00	6.00
39—Mark	40	4.00 - 7.00	6.00 - 10.00					
20—Monticello	175	4.00	7.00			11.00 - 14.00	2.00 - 3.00	3.50 - 5.00
3—Morton	300	5.00 - 7.00	7.00 - 10.00			12.00 - 14.00		
12—Penn-Atlantic	140		7.00 - 10.00				3.00 - 4.00	5.00 - 6.00
31—Runnymede	75	4.00 - 7.50	6.00 - 10.00				3.00 - 4.50	5.00 - 7.00
13—Senator	260	5.00 - 7.00	7.00 - 12.00	10.00	15.00	16.00 - 18.00		
22—Sterling	83	5.00 - 7.00	8.00 - 10.00		11.00 - 12.00	14.00 - 15.00	3.00 - 4.00	5.00 - 6.00

★Rate Includes Breakfast. The above rates are subject to 3% Municipal Tax. (See reverse side for Application for Hotel Accommodations)

Atlantic City Auditorium each day of the exhibition.

Another question might be asked relative to transportation to and from Atlantic City. E. E. Barry, general passenger agent for the Southern Railway System at Washington, D. C., has announced that "The Southern will make available special equipment and most comfortable accommodations as reservation requests indicate volume of passenger traffic headed for the American Textile Machinery Exhibition." Persons wishing to secure regular railroad accommodations prior to the announcement of special train facilities should note that all Southern Railway trains between Southern points and New York stop in Philadelphia, Pa., and from there the Pennsylvania Railroad operates schedules to Atlantic City each day. In addition, Eastern Air Lines has through service to Atlantic City, while Allegheny Airlines operates flights from Washington, D. C., to Atlantic City.

* * *

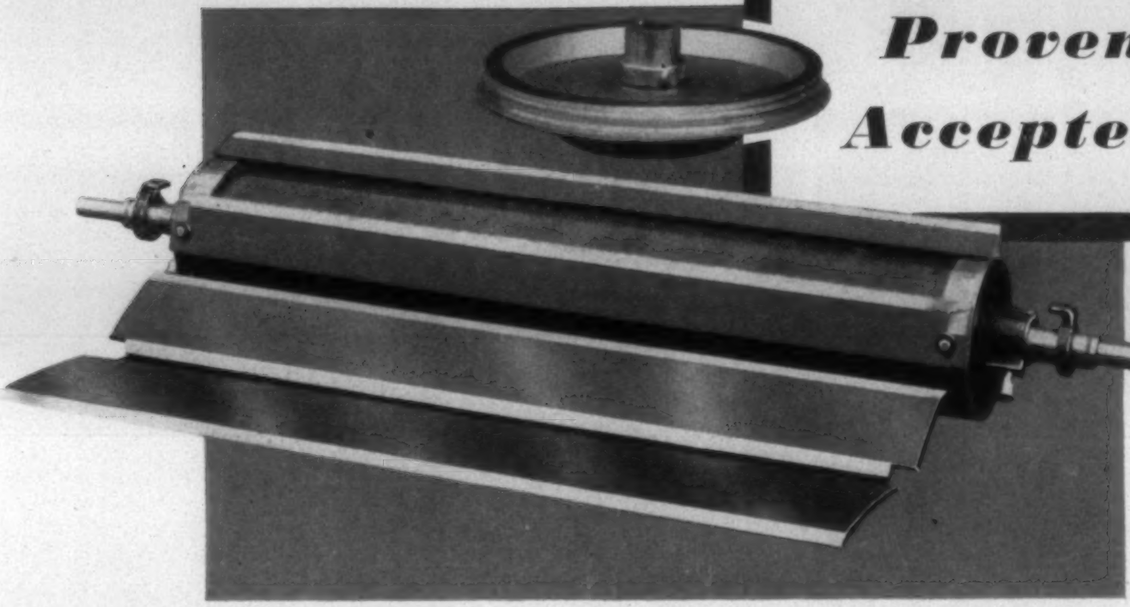
The American Textile Machinery Association will be "guest conductor" of a panel discussion at the March 3 meeting of the American Association for Textile Technologists. Topic of the meeting will be "Today's Textile Machinery Developments." Papers to be presented will cover every phase of textile manufacture pointing up the latest results of technological and mechanical research.

Members of American Textile Machinery Association who will participate in the panel, and subjects they will cover, are: J. H. Bolton Jr., manager, American System Division, Whitin Machine Works, *"New and Improved American System Machinery;"* James L. Truslow, vice-president and executive assistant to the president, Saco-Lowell Shops, *"Recent Developments in Saco-Lowell Machinery;"* W S. Terrell, vice-president, Terrell Machine Co., *"Development of Auxiliary Textile Machines;"* Frederick M. Fitzgerald, director of research, Draper Corp., *"General Developments in Weaving;"* and James H. Hunter, vice-president, James Hunter Machine Co., *"Finishing Machine Developments."* Malcolm E. Campbell, dean, School of Textiles, North Carolina State College, will serve as moderator.

The American Textile Machinery Association, of which Frederic W. Howe Jr. is president, is sponsoring the quadrennial American Textile Machinery Exhibition to be held in Atlantic City April 26-30. The panel of A.T.M.A. representatives will constitute a verbal prevue of outstanding achievements in the machinery field to be on display and in operation at the big show.

A.A.T.T., which has a membership of more than 900 textile technologists, is international in scope. It is unique, however, in that it has no branch chapters, just the one organization with headquarters in New York. It is the membership of A.A.T.T. who utilize the results of textile fiber and textile machine research for development of fabrics which in versatility and suitability meet the varied needs and pleasure of mankind. The March 3 meeting of A.A.T.T. will be held at 2 Park Avenue, 26th floor, New York City, at 6 p. m. Walter C. Hauser, American Viscose Corp., is chairman of A.A.T.T.

Tested!
Proven!
Accepted!



THE GOSSETT IMPROVED CARD FANCY

Eliminates Lumps and Flakes When Carding Synthetics

It is precision built . . . . . machined to your specifications and tolerances by GOSSETT technicians. The extra long spring steel wire fillets are guaranteed to fluff all synthetic fibers from the card cylinder thus enabling the doffer to pick them off evenly. Further, the GOSSETT Card Fancy fluffs the synthetic fibers so well that the doffer will pull off and make as good a sliver as you have ever seen.

When you install the improved GOSSETT Card Fancy there will be no more excess loading on the cylinder. Write at once for full particulars and estimated cost.

B. W. GOSSETT, President
E. C. MASON, Sales Manager
D. W. SMITH, N. C.-Va. Representative

GOSSETT MACHINE WORKS, INC.
GASTONIA, NORTH CAROLINA

program committee. Others of the committee are Robert Ellsworth and K. A. Howry.

* * *

The American Textile Machinery Association at its annual meeting Feb. 2 re-elected all officers and directors for a second-year term. The slate stands as follows: president, Frederic W. Howe Jr. (president of Crompton & Knowles Loom Works); vice-president, W. Frank Lowell, vice-president of Saco-Lowell Shops; secretary, James E. Hollis of Crompton & Knowles; and treasurer, Samuel F. Rockwell, president-treasurer of Davis & Furber Machine Co.

Directors include Messrs. Howe, Lowell, Rockwell and Thomas H. West, president, Draper Corp.; R. G. Ross, vice-president, Barber-Colman Co.; J. Hugh Bolton, president, Whitin Machine Works; James H. Hunter, president, James Hunter Machine Co.; Robert Leeson, president, Universal Winding Co.; William H. Rometsch, secretary-treasurer, Fletcher Works Inc.; and J. Ebert Butterworth, president, H. W. Butterworth & Sons Co.

Divisional directors were re-elected as follows: Division I, Mr. Bolton; Division II, Mr. Rockwell; Division III, Mr. Howe; Division IV, Mr. Hunter; Division V, Mr. Leeson; and Division VI, Mr. Rometsch.

* * *

Here is the official schedule of events for American Textile Machinery Exhibition week in Atlantic City:

Monday, April 26—Exhibition opens in Atlantic City Auditorium at 10 a. m.

Tuesday, April 27—Association Executives Day; special invitation to top elected executive officers of textile associations in national, regional and state groups, with special entertainment in evening for association guests.

Wednesday, April 28—Textile Career Day; featuring textile students and alumni groups and textile foundation officers.

Thursday, April 29—Research Day; top research directors of exhibiting firms to be on hand for consultation, with special trips during day for research groups.

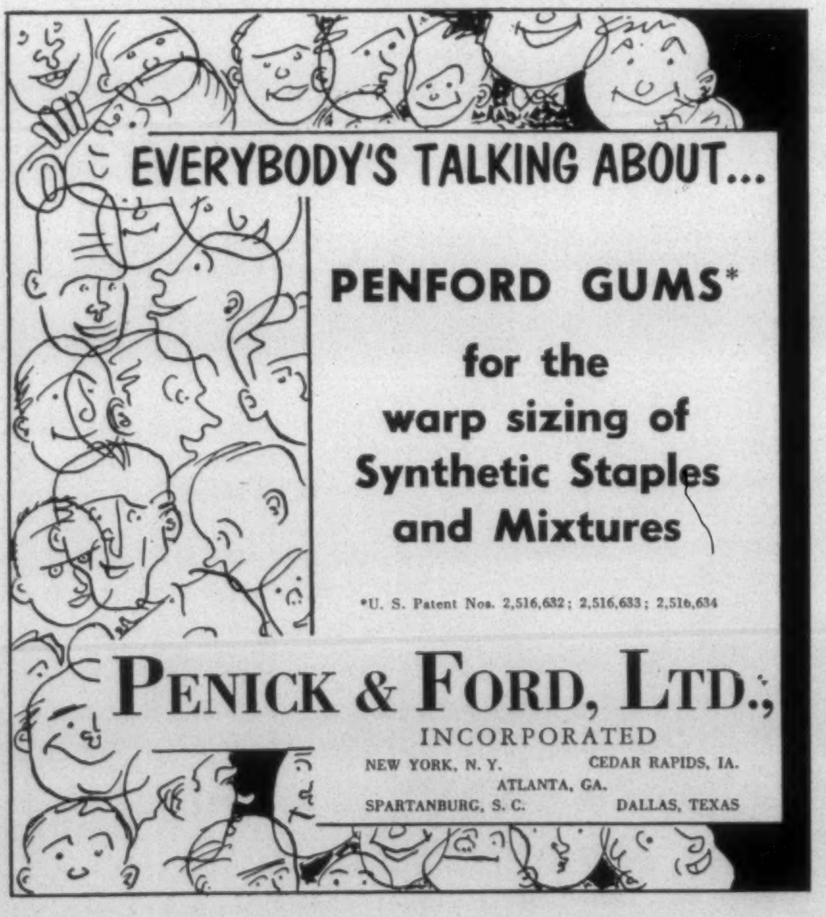
Friday, April 30—Final Day of Show.

NOTE: The exhibition hall will be open from 10 a. m. to 6 p. m. each day except Wednesday, when the auditorium doors will be open from 10 to 10.

The Textile Shops

Acid Tanks
Ball Bearing Journal Assemblies for Slashers and Dry Cans
Bleaching Tanks and Tubs
Card Screens
  Repaired, New
Card Screen Bars and Ribs
Card Screen Lickerins for Cotton and Rayon
Chemical Tanks
Condensers
Condenser Screens
Conveyors
  Pipes and Returns
Coppersmithing
Cowl Ventilators
Cylinders
  Spinning
  Spooling
  Twisting
Drip Pans
Dye Kettles and Vats (New)
Dry Cans
  New and Repairs
Driers
Filters
Misc. Sheet Metal Work
Picker Screens
  Perforated Metal
  English Wire Cloth
  Galvanized Wire
Pneumatic Conveying Systems
Quill Cans
Rolls of All Types and Sizes
Size Kettles
Tanks
Waste Screens
Special Machines Custom Built

SPARTANBURG, SOUTH CAROLINA, U. S. A.



EVERYBODY'S TALKING ABOUT...

PENFORD GUMS*
for the
warp sizing of
Synthetic Staples
and Mixtures

*U. S. Patent Nos. 2,516,632; 2,516,633; 2,516,634

PENICK & FORD, LTD.,
INCORPORATED
NEW YORK, N. Y. CEDAR RAPIDS, IA.
ATLANTA, GA.
SPARTANBURG, S. C. DALLAS, TEXAS

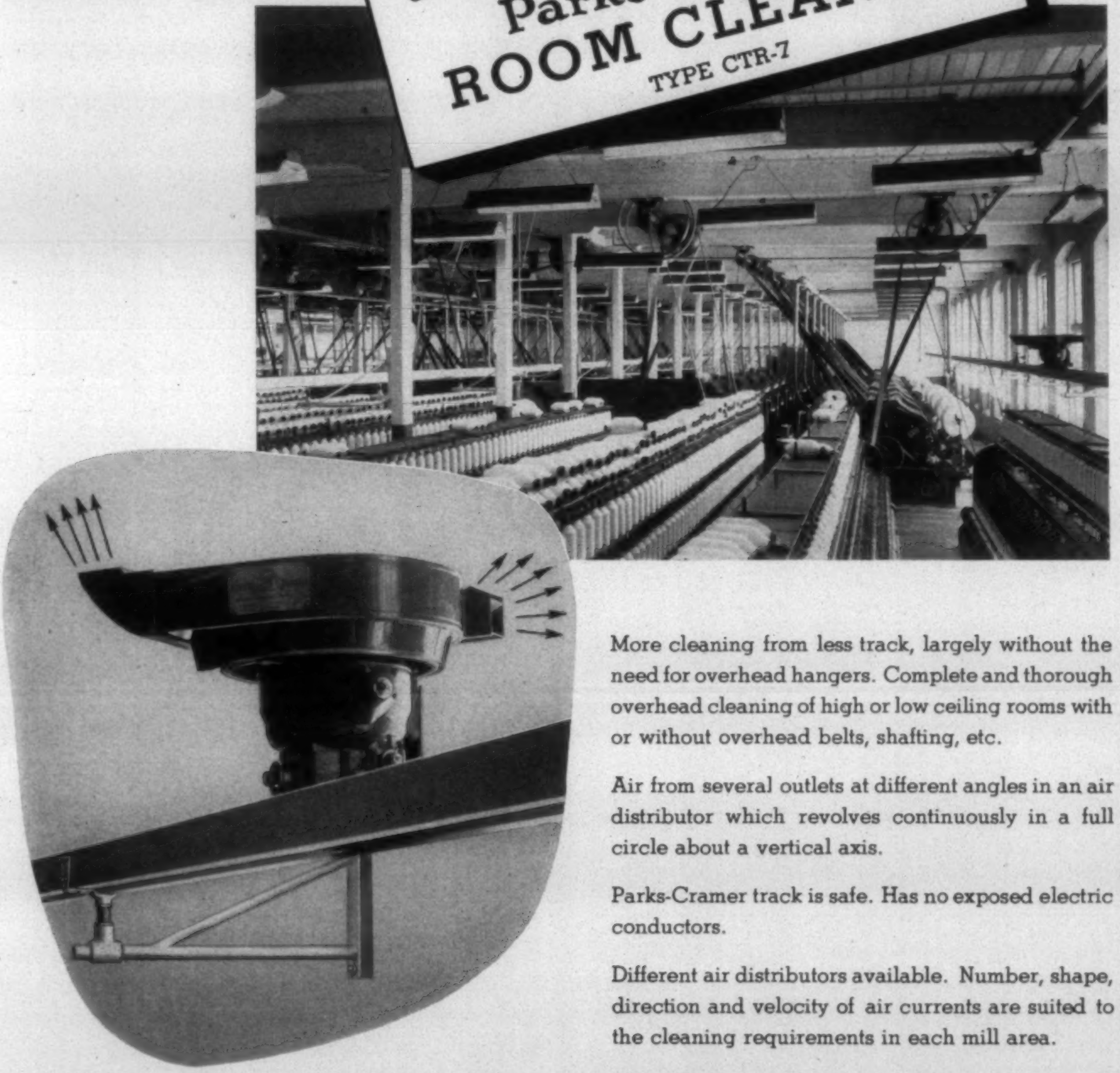
Announcing

a new and more powerful

Parks-Cramer

ROOM CLEANER

TYPE CTR-7



Parks-Cramer Room Cleaner is shown above in a cotton card room of medium height. Note Cleaner track inconspicuously mounted just above head height along posts at left and wall at right.

More cleaning from less track, largely without the need for overhead hangers. Complete and thorough overhead cleaning of high or low ceiling rooms with or without overhead belts, shafting, etc.

Air from several outlets at different angles in an air distributor which revolves continuously in a full circle about a vertical axis.

Parks-Cramer track is safe. Has no exposed electric conductors.

Different air distributors available. Number, shape, direction and velocity of air currents are suited to the cleaning requirements in each mill area.

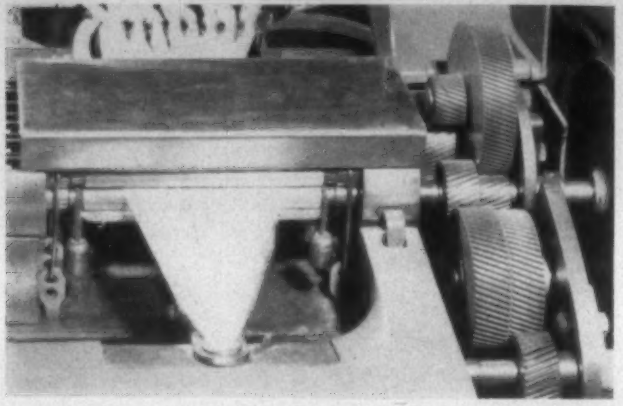
Within limits and where justified, can deliver air below the horizontal.

For further information write or phone

Parks-Cramer Company

FITCHBURG, MASS. CHARLOTTE, N. C. ATLANTA, GA.

394



*A Note**

To Economy Minded

- Presidents
- Vice Presidents
- Treasurers

**Here Is The Cheapest Drawing On The Market*

If you will check the following figures against your present drawing costs—and double-check them with your superintendents and overseers of carding—we feel sure that your next drawing rolls will be Ideals.

These figures are for an average mill operating on a 120 hour basis and producing 180,000 pounds per week.

IDEAL		CONVENTIONAL

Number of Deliveries Required

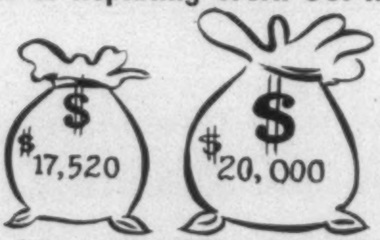
60 Ideal deliveries do the job.

60 100

It takes 100 conventional deliveries to produce the same poundage.

Cost of Replacing Worn Out Rolls

60 Ideal deliveries at $292.00 each, cost $17,520.00.



100 Conventional deliveries at an average cost of $200.00, cost $20,000.00.

A Saving of $2,480.00 in Original Cost.

Comparative Floor Space Needed

(exclusive of aisles)

60 Ideal deliveries and creels require 2,880 sq. ft. of floor space.

2,880 sq. ft.

4,800 sq. ft.

The necessary conventional units require 4,800 sq. ft.

Saving 1,920 sq. ft. of your expensive floor space. What is the cost per sq. ft. of *your* mill?

IDEAL

CONVENTIONAL

Production Labor

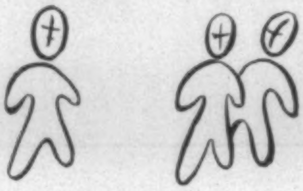
60 Ideal deliveries on 3 shifts require 6 operators or 240 man hours per week.

The conventional frames require an average of 9 operators (3 per shift) or 360 man hours per week.

A saving of 120 man hours per week. What is *your* hourly rate?

Maintenance Labor

One man can easily maintain 60 Ideal deliveries. Because no special training is required, the oiler does this work in many mills.



The average 100 conventional deliveries require the full time service of two trained men.

Oil Used

Ideal's require 64.3% less oil.

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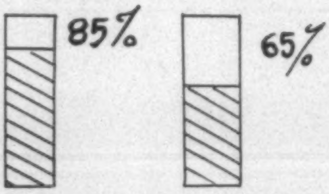

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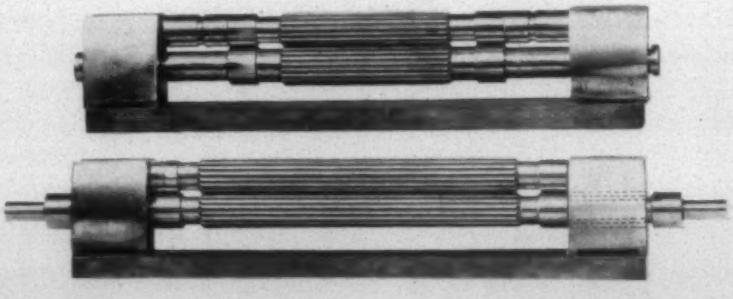

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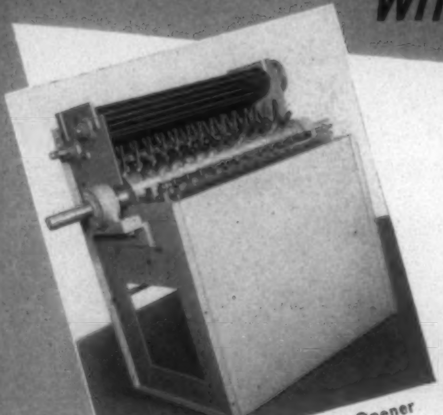

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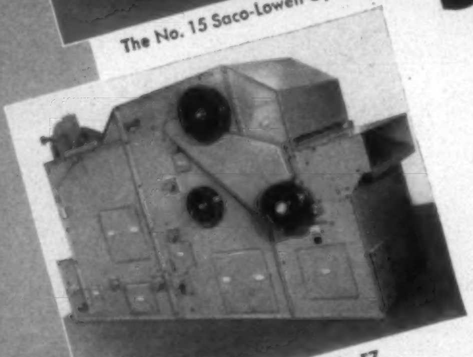

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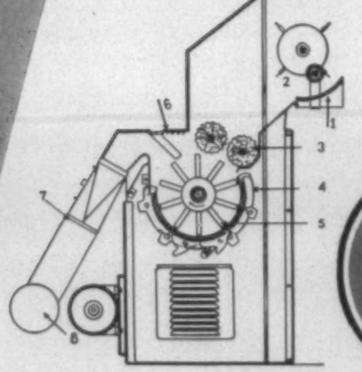

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textile bulletin

VOL. 80 FEBRUARY 1954 NO. 2

World Trade And Cotton Textiles:

No Solution Before 1955?

– STAFF PREPARED –

THE year ahead will bring much debate and discussion on the issue of world trade—in which cotton and textiles have such a vital stake—and as a consequence the basic causes underlying steady deterioration of international commerce may become clearer to a great "middle" group of Americans who at the moment could be classed neither as free trade advocates nor high tariff champions. The prevailing opinion of the most qualified observers, however, seems to be that no ultimate decision on U. S. policy can come before 1955, one of the main considerations being of course that many Congressmen must face re-election this Fall.

Meanwhile, saddled by restrictions of various types which are applied particularly and drastically against the United States, the total volume of world trade in cotton goods continues to dwindle. The United States has currently dropped to fourth place in cotton goods exports, and the decline in overseas shipments of raw cotton, coinciding with bumper yields, has been a substantial factor in the supply situation of the raw commodity which may reach alarming proportions by the end of the present crop year.

Data for the first nine months of 1953 indicate a volume of U. S. export of cotton goods probably not much over 600,000,000 yards, or about one-third of the post-war high in 1947. The darkening cotton goods export picture, together with the drop in raw cotton overseas shipments over the last two years, serves to underscore the urgency for a vigorous new foreign trade policy that recognizes the basic underlying causes of trade distortion and will help more of the world's peoples to expand consumption both of cotton and cotton textiles.

Developments in recent weeks, however, have not all been on the discouraging side. These include the Agriculture Department's apparent discard of proposals for an export subsidy or two-price plan for U. S. raw cotton. This would seem to indicate a recognition at some high levels in government that neither the cotton grower nor the American economy—nor the consumer—can be helped by undermining the domestic textile industry which processes the bulk of the U. S. crop.

As urgent and deserving of fullest and most thorough consideration as the matter of foreign trade policy may be—and the same applies also to finding a means of moving the 1954 cotton crop into normal channels of trade—the chances are regarded as remote indeed that the real "showdown," which must come ultimately in Congress itself, is in the cards for this year, due to the political considerations which favor the continuance of the status quo.

While the report of the Randall Commission is expected to be presented sometime before early March, and President Eisenhower's recommendations to Congress undoubtedly will be based on this report, it is, of course, in Congress itself that the final determination is made, and it would be illogical to expect an extended and prolonged knock-down-drag-out fight such as the controversial issue would precipitate and keep Congress embroiled during the campaign months.

The present Reciprocal Trade Act, largely inactive although still on the books, expires on June 12, and many observers believe that it will be extended just as it is to permit further study of the entire trade and tariff problem, which certainly cannot be evolved in haste. Thus the task facing the industry in the months ahead, according to most of the present thinking, will be mainly one of getting its position before the public and before its elected representatives in the House and Senate, where the issue of foreign economic policies and procedures can be expected to reach a climax sometime probably in 1955.

The textile industry's position has been set forth in the study, "World Trade and the United States" by Dr. Claudius Murchison, economic advisor to the American Cotton Manufacturers Institute, and which it is understood will be supplemented by a second volume now in preparation. This is expected to outline a practical approach U. S. policy can make toward solving the basic world trade problem. The first volume has been attracting widespread interest among various public-interest organizations, colleges, universities and even some government agencies, as revealed by comments received from all parts of the country.

As those who have studied it are aware, the first Murchison volume explores the "Trade Not Aid" theory that dollar shortages overseas are responsible for the breakdown in international trade and presents facts, many for the first time, which show foreign dollar scarcities are by no means as serious as the public has been made to think, and that gold and dollar holdings in foreign countries are actually piling up at a rate that has long since closed the so-called "dollar gap."

The voluminous data presented by the industry seems to make a convincing case for the conclusion that many foreign nations are crying dollar shortages as a smokescreen for justifying continued trade discrimination against America and other countries, and that the core of the whole problem is actually the multitude of discriminatory practices, artificial trade barriers and restrictive policies used almost everywhere outside of North America for promoting nationalistic aims or protecting unsound internal economies of foreign countries.

The understanding is that the second installment of the A.C.M.I. study develops some strong economic reasoning for maintaining an adequate system of trade protection, not alone to safeguard the interests, investments, markets and employment in individual industries that face unfair competition, but to maintain the integrity of the cost structure which is the heart of the American economy. The study, it is reported, is to suggest a workable program around which U. S. economic policy can be shaped toward the ultimate attainment of multilateral world trade.

The U. S. textile industry, on the average, consumes about two-thirds of the domestic cotton crop and produces about twice as much cloth as Japan and the United Kingdom combined. It is not only the major support of the U. S. cotton economy but a tremendous contributing economic support to numerous other domestic industries. Thus, if America's textile mills should be undermined by an ill-advised or unrealistic trade policy, the effect would extend through the entire economic system and the problem of raw cotton exports, already so acute, would become insoluble indeed.

The reasoning is also that should the U. S. cotton grower have to export the bulk of his crop rather than the present 30 to 40 per cent, the balance of market power would shift to foreign governments and to buyers and industries that traditionally think in terms of cartels and operate in economies of low purchasing power and controlled trade. While this is but one factor in the trade picture, it is plain the status of the American cotton farmer would be greatly reduced.

Market Sensitivity

American cotton textile prices, relative to costs, are the lowest in the world by far and U. S. exports, relative to production, are small by comparison with those of other major cotton maufacturing countries. And the fact is the American cotton goods market is about as sensitive to price influence as the raw cotton market, and the sale of even a small quantity of raw cotton or cotton goods at falling prices can have an immediate effect on the values of the whole prodigious American output.

The fact is, as it seemed to be rather strikingly brought out at the International Cotton Goods Conference in England a little over a year ago, cotton textiles as well as the cotton producers have a common stake in an American approach to the world trade problem that would tend to stimulate cotton consumption in parts of the world where it is artificially restricted now and that would establish world trade on a multilateral and expanding basis.

In the matter of growing production efficiency in certain foreign countries, U. S. growers and manufacturers currently are being affected much in the same manner. For instance, in the post-war period the textile industries of certain foreign countries, Germany and Japan particularly, have been virtually completely rebuilt, and are thoroughly modern. In other parts of the world somewhat of the same thing is happening insofar as cotton production goes.

As one illustration of this, Rep. A. Oakley Hunter (R., Calif.), on his recent return from a trip to the Orient, reported that "astounding results" are coming from efforts to replace native varieties with American strains of cotton in India, along with line-sowing, irrigation, improved fertilizers and modern cultivation methods. He reported also a marked increase in staple length, big jumps in yield and marked increases in cotton acreage, and mentioned seeing one stand of cotton six feet high "which should yield close to a bale and a half an acre."

It is disturbing, he noted, to contemplate what effects such events will have on U. S. cotton exports, which are already in bad shape. Observing that exports last year were only about half what they were the year before, he predicted that the new progress in India, brought about in substantial measure with American financing, will cut U. S. exports even more. And he went on to remark:

"In the past India, because of the very short staple length of her cotton, has had to import considerable quantities for her textile industry. The United States, including California, has shared in that business. It is obvious that as a result of this program, imports of long staple cotton from the United States will eventually disappear. Furthermore, India may very likely become a long staple exporting country, in which case she will compete with the United States for the British, French, German, Japanese and other markets. If she continues to pay farm labor 20 to 30 cents a day, she will have a tremendous advantage in taking over those markets."

In respect to cotton goods export, big year for the U. S. was 1947 when nearly a billion and a half yards of cloth was shipped overseas. In 1952 exports of 766,700,000 yards put the United States in first place, slightly ahead of Japan, but indications are the 1953 figure won't go very far above 600,000,000. The export figures for the first three quarters of 1953 are: Japan, 534,900,000 yards; United Kingdom, 524,900,000; India, 513,500,000, and the United States, 477,800,000. American exporters do not look to 1954 as likely to bring any improvement, and think it will be difficult, as a matter of fact, to equal 1953 shipments.

In respect to the domestic raw cotton situation, the Administration has recommended flexible supports that would apply after the current crop year. However, farm groups in the South as well as cotton states Congressmen have indicated they will fight for extension of high support levels beyond the 1953-54 year, and most observers doubt that any substantial change in the cotton program can be accomplished in an election year, any more than there can be a final determination of foreign trade policy in 1954.

While acreage is being reduced this year to around 21,500,000 acres, any adjustment of the cotton surplus through this route obviously would have to extend over several years to avoid a major economic disaster in the cotton belt. The 1954 acreage will represent roughly a 4,500,000 acre reduction over the 1953 crop.

In the long-range, of course, the hope is frequently expressed that greater mechanization of production will permit U. S. cotton to sell on the world market in competion with low-cost foreign cotton or synthetics, although admittedly rising synthetic fiber output abroad is currently a rather dampening factor. In California, with its large irrigated farms, about 80 per cent of the crop is now already harvested mechanically. But in the entire belt only 25 to 30 per cent of the crop is now machine-harvested. The problem in achieving a high degree of mechanization is the preponderance of small farms in the Southeast, which normally accounts for about half the U. S. belt's acreage and about a fourth of present world output.

The necessity, if not urgency, for readjustment of the supply situation is, however, something to which the land of cotton seems largely reconciled, and there seems to be a widening acceptance of the view that the day of growing cotton for government loan is fast approaching an end.

Supplies of U. S. cotton have been built up to a point where estimates are that at the end of the current crop year the carry-over could well approach 10,000,000 bales, as contrasted with 5,500,000 bales last July 31 and 2,800,000 a year previously, with an unprecedented amount of cotton going into government loan.

Obviously growers had no choice but to vote almost unanimously on controls for the 1954 crop, since otherwise cotton would have been supported at 50 per cent of parity rather than 90, and a sudden return to the law of supply and demand would have meant financial ruin. On the other side of the picture, however, the Agriculture Department estimates the nation has about $1.5 billion worth of cotton in excess of market demand for the year ending Aug. 1, and perhaps $1 billion worth will be held by the government itself by Summer.

For cotton has been going into government loan at an unprecedented rate and once cotton is in the warehouse, it is not repossessed until the price is high enough to provide the grower a profit after payment of the loan, storage and insurance charges. As the result, some thinking has embraced a temporary plan of a form of compensatory payment to growers as a means of diverting this year's crop into normal channels of trade until a more balanced cotton economy can be brought about. This, presumably, would involve giving the farmer the difference between the base rate price support and the average price on the ten spot markets on the date of sale. There would be a limit, of course, to the difference, but the idea would be to provide a small margin that would encourage the farmer to sell his cotton rather than put it in loan. Advocates of such a program concede it would be costly but argue that all price support plans are costly, however applied, and they figure the cost of carrying loan cotton this year runs to about $12 a bale.

The proposal of government stockpiling of a quantity of cotton, as much as four million bales, or possibly even more, for emergency use, has gained support in many quarters, on the theory that this would remove some stocks as a price-depressing factor and allow a better start toward holding production in line with demand.

Cotton is, of course, a commodity high on the strategic list in wartime, and twice in recent years price control stocks of cotton have been moved off under stress of war conditions, and when the Korean emergency arose the government had to restrict exports sharply. Advocates of a defense stockpile say the government faces a legitimate responsibility in assuring the availability of raw cotton stocks in event of emergency, and that an adequate cotton supply would eliminate the need of building substitute synthetics plants.

However, the Administration's suggestion of flexible price controls has precipitated strong expressions of opposition both among cotton states Congressmen and farm leaders. For instance, advancing the view Congress won't adopt the flexible support idea, H. L. Wingate, president of the Georgia Farm Bureau Federation, asserted that such a device would "plow under at least a million small farmers and we are opposed to that.".

Senator Clyde Hoey of North Carolina expressed a typical view among cotton states members of Congress when he commented, "I do not think flexible parity will be satisfactory because it would take supports away from the farmer when he needs them most." And Rep. Charles B. Deane of North Carolina expressed this view: "I question whether we should price ourselves into exports by forcing down our prices. As foreign markets regain dollars, we can move into those markets without lowering our prices."

The various segments of the cotton industry seem to be in agreement that neither an export subsidy nor a two-price plan is an answer. The manufacturing industry recognizes immediately of course such devices would wreck the entire cotton textile economy. Farm organizations have expressed no enthusiasm for such proposals and many growers have been very positive in condemning them.

As the cotton belt gropes for an answer for the mounting raw cotton surplus, however, it is recognized that short-range adjustment, from any view, will not be easy. Yet thinking invariably gets back to the many paradoxes of world trade and to means of untangling the network of artificial barriers tending to restrict both world cotton trade and consumption.

Life Among Foreign Textile Workers

By WILLIAM HAYS SIMPSON—Part Twelve of a Series (Summary and Comparisons)

IN England, Holland and Canada as well as in the United States the manufacture of cotton cloth first began in the homes. Later, however, with increased demands for cotton goods and with the invention of such aids to cotton manufacturing as the fly shuttle, spinning jenny and spinning frame, various mills were established.

As the great inventions were made by Englishmen and as that country for a time effectively protected these inventions, England enjoyed for a limited period control over the world's textile markets. However, during the latter part of the 18th Century and the beginning of the 19th Century cotton mills began to appear in the United States during which period Samuel Slater became the best known of the pioneers in the industry. By 1815 there were 99 cotton mills in Rhode Island, 52 in Massachusetts, 14 in Connecticut, making a total of 165 mills, operating 119,310 spindles. In 1831, there were 795 cotton manufacturing establishments in the United States with 1,200,000 spindles, producing goods valued at $32,000,000.[1] The development of the cotton manufacturing industry is illustrated in the following table.

APPROXIMATE NUMBER OF SPINDLES IN OPERATION IN THE UNITED STATES IN SELECTED YEARS[2]

Years	*No. of Spindles*
1840	2,284,631
1850	3,998,022
1860	5,235,727
1870	7,132,415
1880	10,653,435
1890	14,384,180
1900	19,472,232
1905	23,687,495
1910	28,266,862
1915	31,964,235
1920	35,480,953
1925	35,032,246
1930	31,245,078
1935	26,700,946
1940	23,585,938
1945	22,674,852
1946	22,777,000
1947	22,519,000
1948	22,675,000
1949	20,134,000
1950	21,790,000
1951	22,140,000
1952	21,298,000

Thus in 1952 Great Britain with its 33,298,575 spindles had approximately 12 million more than the United States and considerably more than any other cotton manufacturing country.

In making general comparisons between American, English, Dutch or Canadian mills and the social and economic life of textile operatives of these countries the statements in this study relating to American workers will be based largely upon observations made by the writer in textile communities in the South. More frequent references will be made to England because of its prominent position as a cotton manufacturing country.

Generally speaking, the English mills operating in smaller units do not enjoy the advantages afforded in larger mills of that country or in those in the United States. For too many years the management of various mills in England has been content to operate in buildings badly in need of remodeling. Some owners, for various reasons, have not invested in new machinery. However, during recent years funds made available under the Marshall Plan have been helpful in caring for many of these needs in both England and Holland. The improvements have given an appreciable boost to the morale of the workers.

The mills in England, ranging from four to six stories in height, are somewhat higher than most American cotton mills. The arrangements therein are usually similar.

One advantage which the English and Dutch workers enjoy over American operatives are better equipped and better kept toilets and washrooms. The personal habits of the workers account for the general appearance of the washrooms but the facilities afforded in the English and Dutch mills visited are superior to those in most American mills.

Some English or Dutch mills have two shifts but few, if any, have three as is common in America. While work on Saturday mornings in both countries is not unusual. in America it is very seldom, if ever, engaged in during normal periods.

In England the tea wagons and the privilege of making tea is looked upon as a necessity by cotton mill operatives while their American counterparts desire ice-cold bottled soft drinks. Canteens or lunch rooms used by operatives are about the same in both countries with some differences in choice of foods. Americans eat potatoes but few devour "chips" as is done in Lancashire.

As the school-leaving age in the United States is 16, no persons under that age and few, if any, under 18, are employed in American cotton mills. Therefore, no special educational or social advantages are offered youths as is done in England where the school-leaving age was within recent years raised to 15.

Nor has it been necessary for any of the American cotton mills which the writer has visited to establish nurseries to care for children of working mothers. While some nurseries have been established in various cities, they are either self-supporting or are partly supported by the community chests. According to American standards the nurseries operated by English cotton mills are definitely overstaffed.

While some cotton mills own houses which they rent to their workers, the mill village as known in America no longer exists in England. As the population increased in Lancashire during the past century most of the mills which had built homes for their employees sold them and many have since changed hands several times. Of the houses still owned by cotton mills, many are occupied by persons not engaged in textile work. The rent is set by law and no special benefits are enjoyed by the occupants.

In this matter the workers living in American cotton mill villages have decided advantages over textile workers in England. Many of the villages in the South afford better housing than enjoyed by workers in Lancashire and at decidedly better rates than are available to workers in other industries in the same cities in America.[3] The homes of textile workers in the South have larger front and back yards than those enjoyed by operatives in England where there are usually no front yards, the houses being built directly along the street, and only very small back yards which are sometimes completely covered with large flag stones. Where space permits, the English workers usually grow very pretty flowers or fine vegetables. In the growing of beautiful flowers, the English workers are surpassed only by the Dutch.

Generally speaking, the homes of the English and Dutch textile operatives are not as conveniently arranged as those occupied by the cotton mill workers in America. There are certainly both good and bad housekeepers in all three countries but for general neat appearance of the homes the Dutch deserve greatest commendation.

For household conveniences, the American homes are far superior to those of either the English or Dutch. Few, if any, of the textile workers' homes of the latter countries have central heating units and bath rooms are rare. Of the more than 750 English and Dutch cotton mill workers interviewed not one had an electric refrigerator in his home. Ten operatives reported that they had telephones in their homes, two of which were pay telephone booths and another was used in conjunction with a flower shop which was located in the dwelling. Not one of the Dutch textile workers owned an automobile while only ten of the 499 English operatives interviewed owned or were members of families that owned automobiles.

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[1] Copeland, M. T., *Cotton Manufacturing Industry in the United States*, p. 6.

[2] See *Statistical Abstract of the United States*, 1953, p. 814; *Historical Statistics of the United States, 1789-1945*, pp. 186-187.

[3] See, Simpson, W. H., *Southern Textile Communities*, p. 33.

Surveys of various American cotton mill villages in the South yield some comparative figures on the ownership of automobiles and electric refrigerators by operatives and the number of families having telephones in their homes. One mill with 750 living units reported that 62 per cent of the families had automobiles, 95 per cent had electric refrigerators and 53 per cent of the families had telephones. Mill No. 2, with three villages, reported that 71, 52 and 93 per cent of their families had automobiles, electric refrigerators and automobiles, respectively. A survey of the families of Mill No. 3 revealed that 55 had telephones, 81 per cent electric refrigerators and 62 per cent had automobiles. Of 3,601 families represented on the payroll of Mill No. 4 1,910 had telephones, 3,080 electric refrigerators and 2,750 had automobiles.

While the English and Dutch cotton mill workers ride bicycles and walk for recreation, the American operatives drive their cars and spread out over greater areas. Nor, generally speaking, do the social and athletic activities of the workers in the mills of the two countries correspond with those of Southern cotton mills. With the exception of one mill in Holland, no mill had a recreation center which could begin to approach the facilities of at least a dozen centers in different mills which the writer has visited in this part of the country. However, American cotton mills located in larger cities often do not afford more recreational facilities than enjoyed by English and Dutch workers. Dependence is placed upon the municipalities to supply such.

American workers are usually more interested in sport events and enjoy departmental and league competition to a greater extent than European operatives. The Englishmen's interest in cricket may approach the American's love for baseball but it is very doubtful that equal comparisons can be made in other athletic activities. A more varied sports program is offered in America than in Europe.

Likewise, American churches sponsor more social and athletic activities than do the churches of England and Holland, thus affording additional interests to cotton mill workers.

Generally speaking, the cotton mill workers of the four countries are similar in that they are composed of a conservative group of people. They are members of various religious denominations but are predominately Catholic in Canada and Protestant in the Southern part of the United States. The operatives are regarded as substantial citizens in the countries in which they live.

The facilities for training of textile workers are somewhat superior in England and in the United States. Vocational education in the two countries is supported by both the industry and the government. Night and day schools are available to operatives and technical institutions are well equipped for this training of advanced students. Research in textiles is also emphasized in the two countries. The Dutch and the Canadians depend largely upon the American and English schools for advanced training in textiles.

The Dutch and English cotton mill workers are very similar in their views on credit. They seldom borrow money and installment buying is not very popular with them. On the other hand the Canadian operatives borrow money more frequently and are not adverse to installment buying while the textile workers of the Southern part of the United States indulge freely in both. Too many workers are attracted to the "dollar down and a dollar a week" offerings with little or no attention being given to the excessive carrying charges.

While Canadian workers are protected by effective small loan laws the operatives in many of the Southern states in America are exposed to the nefarious practices of licensed money lenders who exact from 200 to 500 per cent interest per annum from borrowers on loans of $50 or less.[4]

A review has been given of the welfare benefits available to workers in England and Holland. While America has no such heavily tax supported schemes the health and welfare of the workers is cared for in many ways. By an employer-employee tax a retirement system has been established as provided for in the Social Security Act, all states have enacted workmen's compensation laws, and unemployment compensation is provided for by law. In addition to these and other benefits provided the workers by law all American mills have well equipped first-aid rooms with trained personnel available to care for minor injuries. Some mills have clinics, infirmaries or hospitals with resident medical staffs. Others have regular visits by doctors and dentists to the mills to care for various ailments of employees.

Group insurance or pension plans financed wholly or in part by employers have been adopted by mills with 85 per cent of the total textile employment. Health insurance, hospitalization and life insurance is available to 64, 71.7 and 74.4 per cent, respectively, of the cotton mill workers in America. Retirement plans, relatively new to the cotton industry, had by March 1952 been put into effect by cotton mills with 10.6 per cent of the industry's employment.[5]

In the international comparison of wages, difficulties are involved because the various national systems of compilation of wage statistics differ greatly, making it difficult to bring the information available to a common basis for international comparison. Some reasons for the lack of comparable data are that (1) the different countries give statistics of earnings for different time intervals, (2) it is difficult, if not impossible, to obtain textile wages in all countries for the same selected years, and (3) because of varieties of products and the complicated character of piece-work lists reliable data on piece-work rates is not available.

In noting the wage figures which follow the above difficulties and others should be kept in mind. It should be added also that the conversion of wage rates into United States currency by means of foreign rates does not provide accurate comparisons of differences in purchasing power.

While in March 1952 cotton textile workers in the United States averaged $1.19 an hour exclusive of shift and overtime premiums,[6] operatives in Canada averaged $1.05 an hour in September 1952.[7] The average hourly earnings of cotton mill workers in England in the last pay-week in

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[4] Simpson, W. H., *Southern Textile Communities*, pp. 116-121.

[5] *Wage Structure, Cotton and Synthetic Textiles*, U. S. Dept. of Labor, March 1952, Table 28, p. 40.

[6] *Ibid*. p. 1.

[7] Figure prepared by Division of Foreign Labor Conditions, U. S. Dept. of Labor; Source, "Man Hours and Hourly Earnings" published by Dominion Bureau of Statistics, Ottawa, Canada.

April 1953 was 33.9 d. (39 cents) and in Holland in the cotton and linen industry in September 1951 the average hourly earnings of spinners and weavers were 1.32 and 1.30 guilders (about 35 cents), respectively.[8]

After considering various influences the following figures were compiled by the International Labor Office.[8]

"REAL" HOURLY EARNINGS OF TEXTILE WORKERS IN VARIOUS COUNTRIES[1]

(U. S. cents with a computed purchasing power over a number of food items in the countries listed during 1938)

Country	1938	1947	1948	1949
United States	46.0 (1939)	65.0	68.0	70.0
Canada	40.5	62.0	62.0	64.0
United Kingdom ..	25.0	35.0	36.0	38.0

1. As measured by comparative food prices in 1938 (cost of U. S. food basket=100) and by movements of money textile wages and general cost-of-living indexes within each country since 1938.

In another part of the study the organization above mentioned stated that according to prices of October 1949 one hour's textile wages in the United States would purchase 5.69 kilograms of wheat flour, or .77 kilograms of first quality beef or 5.31 litres of milk as compared with 3.82 kilograms, .48 kilograms and 3.13 litres of the same items in the United Kingdom.[10] The author, however, points out that the facts and figures obtained from this method of analysis must be interpreted only in the full knowledge of their limitations.

It is difficult to estimate the advantages of the additional welfare benefits made available to workers in England and Holland by legislative enactments. It is likewise not easy to appraise the benefits enjoyed by operatives living in American mill villages where low cost rentals are enjoyed and water, electricity, coal, wood, bus transportation, medicine and milk are often supplied free-of-charge or at a reduced rate basis. The management's assistance to the local schools and churches has aided the operatives and their families in their educational and religious development.

The building of community centers with swimming pools, basketball courts, game rooms and the like along with athletic fields have added much to the recreational life of cotton mill employees. A dollar valuation of these and other non-material benefits enjoyed in various cotton mill communities cannot be made.

A part of this study is devoted to a description of the organization of labor in the countries visited. While many of the American cotton mills are not unionized the employees of those organized are members of either the Textile Workers Union of America, affiliated with the Congress of Industrial Organizations, or the United Textile Workers of America, affiliated with the American Federation of Labor.

Textile labor union leaders in America do not discourage technical changes and the introduction of new methods because such affords opportunities for labor to obtain higher wages and better working conditions.[11] In England, however, changes have sometimes met with considerable resistance by segments of certain labor unions. Several years ago when it was observed that in England spinning required three operatives and weaving required two and a half to two in America, impetus was given to redeployment in Lancashire mills. By 1952 about 26 per cent of the spinning mills and about half of the mills in the areas, where the local trade union permits redeployment, were working on redeployed systems. There are other areas, however, where unions do not permit redeployment and thus management has been denied the means of increasing productivity of operatives and machines in the industry. Under such circumstances it is hardly possible that management will be anxious to risk additional capital to improve or expand the industry.

From time to time textile workers in all the countries have suffered economically. Good years have been followed by bad years and vice versa. The operatives, however, are not generally depressed. They have survived once, they will survive again but all hope for greater security. To the American cotton mill operatives this security is more apparent. Their work week is the shortest and regardless of the formula used his income is the largest. After caring for the necessities of life it is the American textile workers who can afford the greatest number of automobiles, telephones, television sets, electric refrigerators and the other conveniences that make life more pleasant and comfortable.

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[8] Prepared also by Division of Foreign Labor Conditions; Source. Statistiek der Lonen, September/December, 1952, Central Bureau voor de Statistiek.

[9] See *Textile Wages*, Table IX, p. 45.

[10] *Ibid.*, Table XIII, p. 53.

[11] See notes on address by Solomon Barkin, Research Director, Textile Workers' Union of America, in *Productivity Team Report, Cotton Yarn Doubling*, pp. 64-65.

Fiberglas Technology, Brought Up To Date

THE surface properties of a solid are dependent on the internal structure close to that surface and the conditions to which it is exposed. Textile fibers are of such fine diameter that their surfaces have a major effect on their physical properties. You are quite familiar with the surface effects of organic fibers whose polymers are based on the element carbon. With the glass we are also dealing with a polymer which, however, is inorganic and based on silicon in its very stable form, the oxide. The oxygens are arranged around the silicon in the form of tetrahedra with four oxygens at the apexes. These tetrahedra are combined with others like them in such a manner that they form a network. At intervals one or more of the apexes are not bonded to another silicon but rather to a metallic ion. The resultant may be described as a three dimensional network whose regular order is disrupted by metallic ions such as sodium calcium and aluminum. The structure is formed by a fusion of silica in the form of sand with metallic oxides. The result is a liquid which is mobile at temperatures above 2,000° F., having no definite melting point but which gradually increases in viscosity as the temperature is lowered. It is this property which makes glass fibers possible. Thus the inorganic polymer may be described as a thermoplastic whose working range is in the order of 2,000° F. From this we observe a major difference between this polymer and those prepared from carbon in that completely crosslinked organic polymers are infusable and decompose without melting.

The internal fiber structure may be described as a continuous network whose dimensions are determined by the length and diameter of the filaments. Since the internal structure is also rigid as well as continuous, flexibility can only be attained by drawing the filaments to extremely small diameters.

Fiber stretch is quite low in the order of three to four per cent. The filaments have no yield point and are completely elastic. Fatigue of the filaments through pressure has not been observed. They may be flexed indefinitely with no apparent effect.

As is generally known the tensile strength of glass fibers is exceptionally high. This becomes even more impressive when one compares the strength of glass fibers around 400,000 pounds per square inch to bulk glass which is only 10,000 pounds per square inch. The difference has been attributed to such factors as internal stresses, caused by shock cooling from the molten state, and a surface which is free of imperfections. Orientation, which is such an important factor in the production of high tenacity organic fibers is non-existent in glass fiber.

Annealing of the glass fibers at elevated temperatures results in a gradual loss in tensile strength with a corresponding increase in the density. This is attributed to a compaction of the expanded structure which had been fixed by the shock cooling with a resultant relief in the accompanying stressed condition. The magnitude and rate of this increases with temperature and begins to occur at 400 to 500° F. Aging of the fibers at elevated temperatures below the softening point results in a roughening of the surface which appear as nodules. These are believed to be evidences of crystallization or devitrification within the fiber structure.

Due to the compact nature of the glass structure and the lack of rills or voids, water will not penetrate the fiber but is absorbed on the surface. Here, due to its polarity it is strongly held and only under special conditions is it possible to remove the last few layers.

Since the glass polymer is composed of a combination of metals, already in their oxidized state, the fibers will not burn or oxidize when heated in the presence of oxygen. Also due to the low level of chemical activity of the metallic oxides used, they are unaffected by a wide range of chemicals and are only susceptible to the action of such materials as alkalies, hydrofluoric acid, and hot phosphoric acid.

The coefficient of friction of fiber on fiber is extremely high. As a result the abrasion resistance of uncoated filaments is extremely low. To alleviate this condition and make it possible to process this material the filaments must be coated and lubricated to protect them. The materials used in the application must be so designed that protection will occur without stiffness or excessive lubricity which would adversely affect further processing. Since the fibers are free of surface imperfections mechanical adhesion is not possible. Since absorption is also impossible, adherence of lubricants, or resins can only be achieved through a chemical bonding, or a complete envelopment of the fiber. The resultant product is then transformed to a glass reinforced product whose surface characteristics are those of the chemical with which it is coated.

The softening point of glass fibers is very high. No flow or yield under stress will occur at temperatures below 500° F. Above this temperature deformation is slow until a temperature of 1,000° F. is reached. As a result of this, creasing or wrinkling of bare glass fabrics is impossible at room temperature.

The how, why and what-to-do-with Fiberglas yarns and fabrics were described at the Feb. 3 meeting of the American Association for Textile Technology in New York City by three representatives of Owens-Corning Fiberglas Corp., Ashton, R. I.: Dr. Alfred Marzocchi (manager, textile chemistry section, textile research and development laboratory); Richard C. Horton (manager of the industrial textile development section in the last laboratory); and R. F. Caroselli (manager of the decorative fabrics department). Mr. Marzocchi begins the discussion with a description of the chemical structure and its effect on the properties of glass fibers.

Individual filaments, as in any glass of like composition are transparent, but due to the extremely small diameters the yarn appears white. A form of dope dyeing or chrome spinning of the filaments has been attempted by the addition of colored metallic oxides or elements to the glass batch. Due to the filament transparency and the low tinctorial values of the colors only pastel shades were possible. We have also found that we can produce colors of extreme temperature resistance by coating our glass fiber surfaces with metallic salts and then firing the resultant product to produce surface oxides which are colored. Here again, however, only pastel shades are possible.

To produce a yarn which could be successfully package dyed we changed the surface of the glass by coating it with a protein material which is susceptible to acid or direct dye. Thus we are able to dye our yarns with a wide range of colors having a good depth of shade. Under conditions which allow us to use our coatings we have resorted to pigment dyeing techniques in which the pigment is held on the fiber surface by a resinous material. With the advent of new techniques for coating and handling this material, it will be one of the lowest priced textiles. Its major problem at present is the lack of chemicals designed for it.

Vinyl Coated Fiberglas Yarn—A New Basic Textile (Horton)

The successful utilization of two materials, both commercially unknown 20 years ago, has made available to the textile technologist a new basic textile—vinyl coated Fiberglas yarn. Extensive research activity, initiated in 1945 to find coatings which would make Fiberglas textiles more flex and abrasion resistant, has resulted in the development of techniques which make possible large scale commercial production of Fiberglas yarn armored with a tough sheath of vinyl. In 1952 approximately 30,000 pounds of the new yarn were produced. Presently the industry has an estimated capacity of over three million pounds per year of coated yarn, and the supply may not keep pace with demand.

The coated yarns are produced by pulling continuous filament Fiberglas yarns at constant speed through a bath of a polyvinylchloride plastisol or organosol, through a suitable wiping die, and then through an oven capable of heating the coating to the fusion temperature of 350° F. Resin pick-up varies between 50 per cent by weight on fine yarns to 35 per cent on heavy cords. A plastisol is a mixture of polyvinylchloride resin, plasticizers, heat and light stabilizers, and pigments. If the mixture is formulated to contain volatile thinners also, it is known as an organosol. Present coating speeds range between 100 and 450 feet per minute. Both horizontal and vertical ovens are used, with most coating being done horizontally.

The Fiberglas yarns used are treated with organic water repellents to insure high wet strength, and an organophilic surface to improve adhesion of the vinyl coating. Fine yarns are sized with a stearato chromic chloride complex during manufacture, while heavier yarns are treated with hexadecyltrichlorosilane as a pre-dip in the coating sequence.

Yarns in volume production range in diameter from 13 mils to 61 mils; in yardage from 3,500 yards per pound to 145 yards per pound; in strength from ten pounds tensile to 165 pounds. Pilot quantities of yarns ranging from three mils to ten mils are being made available.

The vinyl coated Fiberglas yarns combine the properties of high tensile strength, dimensional stability, heat and flame resistance, color stability, low temperature flexibility, resistance to a wide range of chemicals, rust and corrosion resistance, good textile processing characteristics, heat sealability, and low cost.

This impressive list of properties makes these yarns eminently satisfactory for use in woven insect screening, the present largest poundage application. The yarns are under evaluation in outdoor furniture upholstery and automotive seat cover fabrics. In the near future, automobiles may not only have bodies made of Fiberglas reinforced plastic, but may be upholstered with fabrics reinforced with Fiberglas. Other end-uses in the developmental stage include tobacco shade cloth, luggage fabric, awnings, curtains, and draperies. The electrical industry is using coated yarns in wire and cable coverings, as tying cord, and as tracer yarns. The rubber industry has announced the use of vinyl coated Fiberglas yarn as the reinforcing fill in woven fire hose jacket. Vinyl film manufacturers are using open fabrics woven from these yarns to add dimensional stability to the films. A staple form is useful both as a binder and reinforcement in felted products. The most unusual application announced is the use of vinyl coated yarn as netting in lobster nets.

The commercialization of coated Fiberglas yarns during the last six months adds a new chapter to the story of the amazing growth of the glass fiber industry, an industry created through aggressive research and development.

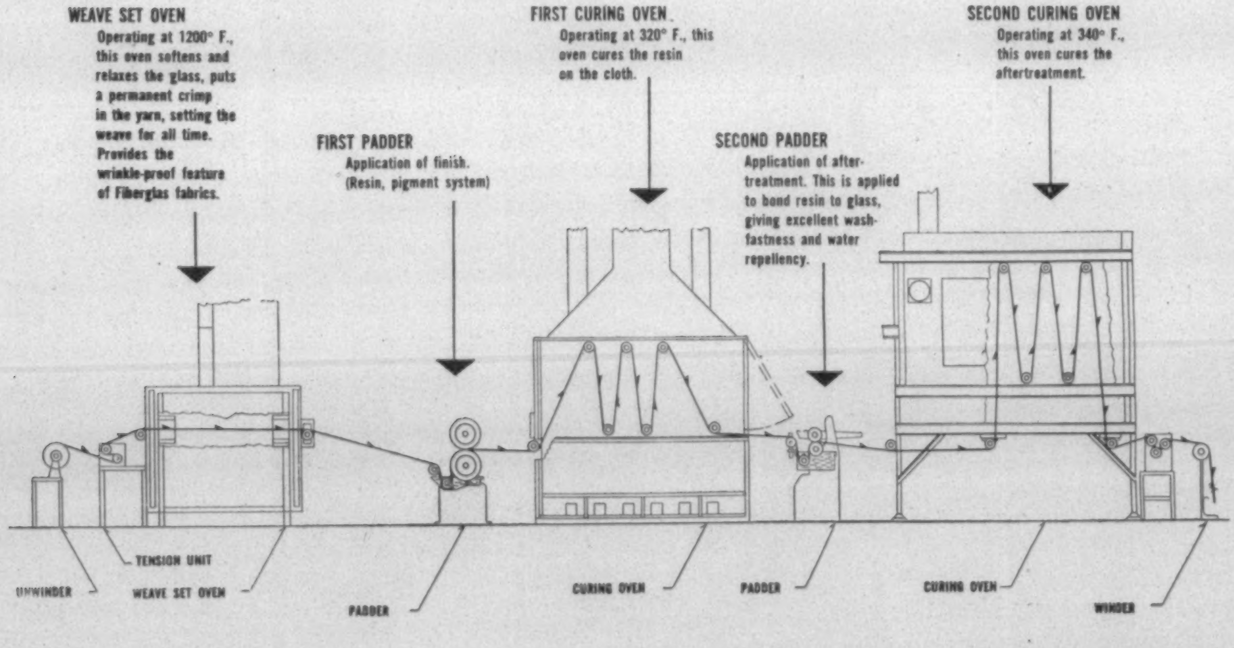
Dyeing, Finishing and Printing of Glass Decorative Fabrics (Caroselli)

Since the advent of the Coronizing process has lifted the role of decorative glass fabrics from that of a mere firestop to that of a textile drapery fabric of not only distinctive beauty but also of enviable performance and serviceability, it seems only fitting that this entire talk tonight be hinged about the Coronizing process itself. We shall therefore use a schematic drawing of the process as our outline, stopping here and there to discover just where and why some of the superlative properties are imparted to glass fabrics.

The general impression of Coronizing seems to be that it is a high temperature heat setting process very similar to those now in use on many other synthetics. I am afraid that this is a case of over-simplification. Process-wise it is just that simple, but a true explanation of just what is happening during this process is a bit more complex.

First, the glass fabric is passed through a muffle whose temperature is maintained at 1,200° F. Now, let's pause for a moment and study what happens to this fabric during

A schematic drawing of the *Coronizing* operation for finishing Fiberglas fabrics, showing the basic operations performed.


WEAVE SET OVEN
Operating at 1200° F., this oven softens and relaxes the glass, puts a permanent crimp in the yarn, setting the weave for all time. Provides the wrinkle-proof feature of Fiberglas fabrics.
FIRST PADDER
Application of finish. (Resin, pigment system)
FIRST CURING OVEN
Operating at 320° F., this oven cures the resin on the cloth.
SECOND PADDER
Application of after-treatment. This is applied to bond resin to glass, giving excellent wash-fastness and water repellency.
SECOND CURING OVEN
Operating at 340° F., this oven cures the aftertreatment.
TENSION UNIT
UNWINDER
WEAVE SET OVEN
PADDER
CURING OVEN
PADDER
CURING OVEN
WINDER

its five to 15 seconds stay in this oven. The first visible effect of this heat-treatment is that any organic matter which might be contained in the fabric in the form of yarn sizing is instantly burned off, disappearing up the stack in the form of gases, thus leaving a pure glass fabric. Now, at this point, if we should study the fabric closely we would discover that a crimp is set in the fibers that conforms to the weave pattern of the fabric. We would also note that the long glass rods are no longer stiff nor harsh, but, rather, soft and limp and relaxed. The fabric also seems wrinkleproof at this point, more so than any comparable competitive fabric has ever seemed. This wonderful property of wrinkle-resistance comes as no surprise to one who is familiar with the physical aspects of glass, itself, for since glass has no yield point to speak of at ordinary temperatures, it would only naturally follow then that all wrinkling is instantly recoverable.

All these observations are of course pleasing to anyone attempting to put glass to a practical use as a drapery fabric. However, familiarity unfortunately brings to light more than just these heartening properties, and a researcher soon finds himself face to face with the fact that as it emerges from this heat set oven this fabric is very vulnerable to abrasion. He finds that these soft yet strong glass rods that so magnificently retain their shapes are prone to scratch one another when the fabric is worked.

But a researcher's dream is a world full of problems, anyway, and so pleased by the fact that a problem does seem to exist here, he goes to work on it. The answer seems obvious. He must find some way to protect those fibers from one another. Some sort of abrasion resistant finish must be applied, and applied before the fabric travels any further. This, then, would explain the textile pad that immediately follows the 1,200° F. oven.

Please bear in mind that going into this pad box is a fabric that has the nearest thing to wrinkle-proofness ever seen in a textile. The researcher quickly finds that most any material that he places in this box, other than just a mere lubricant, tends to diminish this wrinkle recoverability. However, he is able to find a few which give excellent abrasion resistance and yet still leave the fabric the best "no ironing" story in the field.

We now find ourselves with a list of resins that might do the trick. But there are many other properties that must be accounted for. That fabric that left the heat-setting oven was absolutely incombustible. That researcher hates to lose that property. Testing each resin on his list, he finds he has to cut it in half if he is going to have a fireproof fabric.

We now find him with a fabric that needs no ironing, has good abrasion resistance and doesn't burn. Does this make a good decorative fabric? How does the fabric drape for instance? Unfortunately, some of the eligible resins seem to be better fitted for a plastics program, and these then must be eliminated.

We're down to a worrisome few now, and it is discovered that this decorative fabric is still no decoration. Where is the color? Pigments of course have to be used. How well then do the compounds that still remain on our list bind pigments? The list grows smaller again.

Glass withstands the attack of sunlight, of atmospheric gases and of organisms as no other textile can. Do any of the remaining resins impair this magnificent property? It is surprising how few really desirable chemicals are still on the list after this analysis.

Now, you might ask, with all those wonderful properties what is the necessity of that second pad? That pad is needed to apply a chemical that will give our fabrics washfastness. No resin has as yet been found that will attach itself to glass so well that it will withstand normal washing or drycleaning. We are still searching for such a material, but in the interim this pad box takes very good care of the situation. It contains stearato-chromic chloride. A few tenths of one per cent of this material padded over the acrylonitrile latex material which is applied by the first pad and excellent washfastness results. Stearato-chromic chloride has great affinity for glass and also for certain chemical groupings. We like to picture it as a sort of chemical bridge joining the glass to the acrylonitrile finish which is currently being used on glass decorative fabrics.

To prepare glass for printing the coronizing operation is interrupted after the first pad. The same acrylonitrile type of latex is applied, but in a lower percentage. The fabric can then be printed by conventional printing methods, both by screen and machine. This is done both by water-in-oil and oil-in-water resin systems. Not all the recognized resin-pigment systems work, for here again we have to rely on the action of stearato-chromic chloride for washfastness, and, thus, only those systems are applicable whose resins can be fixed by this chemical. Even those systems must be rigidly screened by the same process of elimination that we have just gone through in filling the first pad box, for we are proud of what we have achieved. For where else have we seen *all* the properties that lie in this *one* fabrib?: it never needs ironing; it resists soil; it will not burn; it's easy to clean; it drapes well and looks beautiful; it cannot shrink; it will not fade in sunlight; it is water repellent; it will not rot or mildew; and it is not affected by the atmosphere or gases.

A HANDBOOK OF TWISTING

By NEAL TRUSLOW, Superintendent of Product Development, United States Rubber Co., Winnsboro, S. C.

– Chapter II, Part Two (Twisting Devices) –

ABOUT 1828 John Thorpe invented the ring twisting method for use in making ply yarns. This process was perfected to such an extent that by 1888 it had proven itself superior to the mule for the cheap production of single yarns from cotton.

A number of different manufacturers produce ring spinning or twisting frames today. In particular, the names of Whitin Machine Co., Saco-Lowell Shops, Davis & Furber and Stellite American Co. are well known producers of this type of equipment. The equipment made by all of these concerns is similar in that the strand of fibers is delivered by a pair of rolls, goes through a guide, passes around a traveler and then is wound onto the package.

A ring spinning frame has rotating spindles on which are positioned the yarn packages (see Figs. 2-6 and 2-7). Each spindle is in the center of a polished circular track called a ring. This ring is supported by the ring rail which moves vertically in order to provide the necessary traverse to wind the yarn on the package. The upper edge of the ring has flanges and over these flanges is loosely fitted a small metal clip called a traveler. The yarn can be threaded through this traveler and it will still be able to rotate freely on the ring. In operation the traveler sometimes attains a speed of 90 miles per hour and so extreme care is taken in the design of both the ring and the traveler. The parts are made with highly polished surfaces and are designed to promote cooling and in some types ingenious methods of lubrication have been provided.

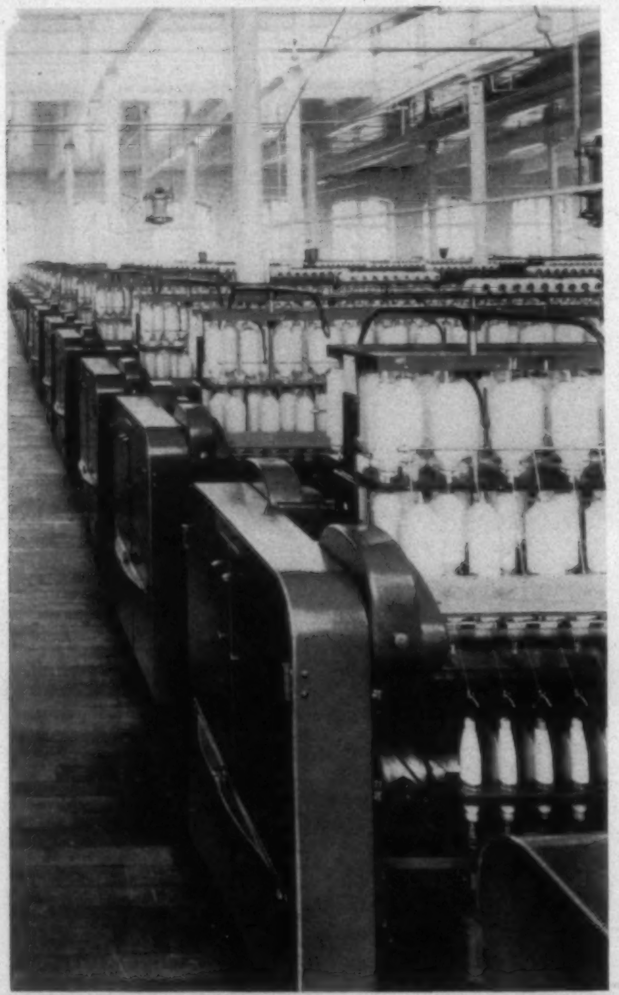


Fig. 2-6—Modern ring spinning frames. ***(Courtesy Whitin Machine Works.)***

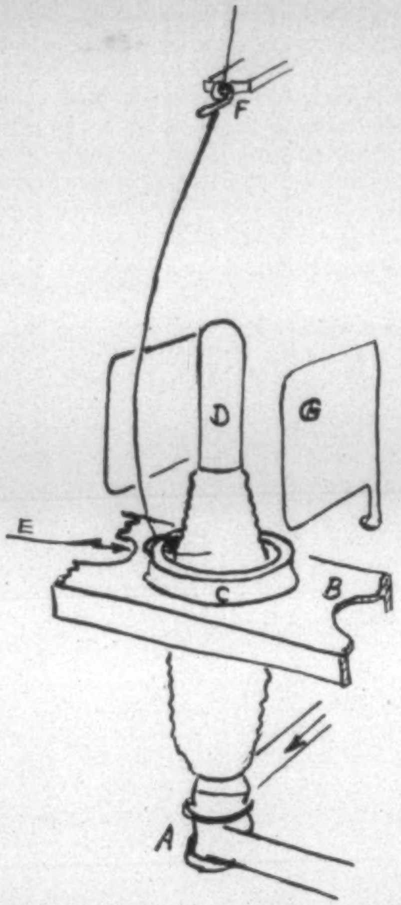


Fig. 2-8—Ring spinning spindle. A, spindle whorl; B, ring rail; C, ring; D, bobbin; E, traveler; F, pig tail guide; G, separators.

The principle of twisting is similar to that of cap spinning. When the spindle is rotated, the yarn balloons out and the tension so produced inhibits the winding of the yarn onto the bobbin (see Fig. 2-8). This tension causes the traveler to rotate around the ring carrying the yarn with it. Each rotation of the traveler causes a turn of twist to be inserted into the yarn. As is the case with cap spinning, the twist starts to be put into the yarn as soon as it is released by the front rolls so that the twist is essentially completed by the time the yarn goes through the traveler. The rotation of the spindle causes the yarn to be wound on the bobbin as fast as it is released by the front roll (minus a small amount due to the contraction of the twisted yarn which affect will be discussed later). Ring spinning frames handling staple fiber normally operate at spindle speeds of 5,000 to 12,000 r.p.m. and frames handling filament or yarns operate at spindle speeds of 3,000 to 15,000 r.p.m.

Ring spinning has had its widest use in the manufacture of cotton yarns, but the method is so versatile that it is being widely used for all types of fibers in yarn sizes from

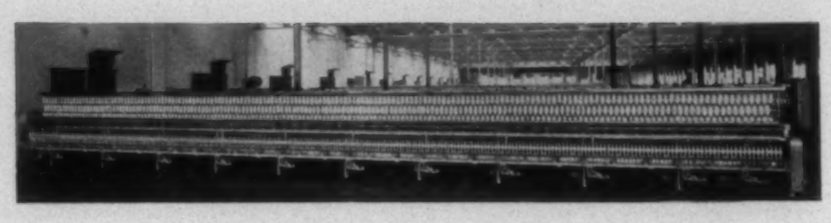


Fig. 2-7—Cogne cotton spinning frame, 500 spindles, in operation at a mill in Legnano, Italy. ***(Courtesy Stellite American Corp.)***

2s to 80s cotton count. In various forms, the ring system has also been very widely used for twisting various types of filament and plying different kinds of yarn. Ring spinning and ring twisting are used today more than any other method and this dominance is expected to continue for a long period.

Ring spinning is favored for handling a number of different types of fiber and yarn because it produces a reasonably uniform product at a minimum cost. The cost is low because the machinery is relatively simple and inexpensive to build and because a small amount of labor is required to operate a ring frame. It can be seen that each spindle can be quickly threaded up by throwing a loop around the spindle and catching a portion of the yarn under the traveler. In doffing the full bobbins there is practically nothing to be removed before the bobbins can be taken off.

A number of devices have been utilized in ring frames in order to improve the twisting when staple fiber is being made into spun yarns (see Fig. 2-9). In such an operation, a major factor in cost is the frequency that the yarn breaks while it is being twisted and is usually referred to as "number of ends down per 1,000 spindle hours." One novel device used to reduce ends down is the Hegemax invented by E. G. Hegedus and manufactured by Neotex Ltd., Switzerland. The Hegemax device replaces the thread guide and overcomes the reduction of twist produced by the friction of the thread guide as the yarn passes through it. At the same time the Hegemax imparts an additional "false twist" to the yarn so that the fibers as they leave the front roll are all tightly twisted together before the strand can be pulled apart by the centrifugal and tensile forces that act on the yarn during ring spinning. The device consists of three small circular discs, the largest of which drives the rotating twist tube called the "turbine." This turbine, which is no larger than a thimble, has an arrangement of a slit and three wire inlets, one of which is eccentric, and gives the twisting movement to the thread. The device is driven by a belt so that a 20 per cent increase in twist is obtained. It is claimed that reduced ends down, improved quality and higher operating speeds are obtained with this device.

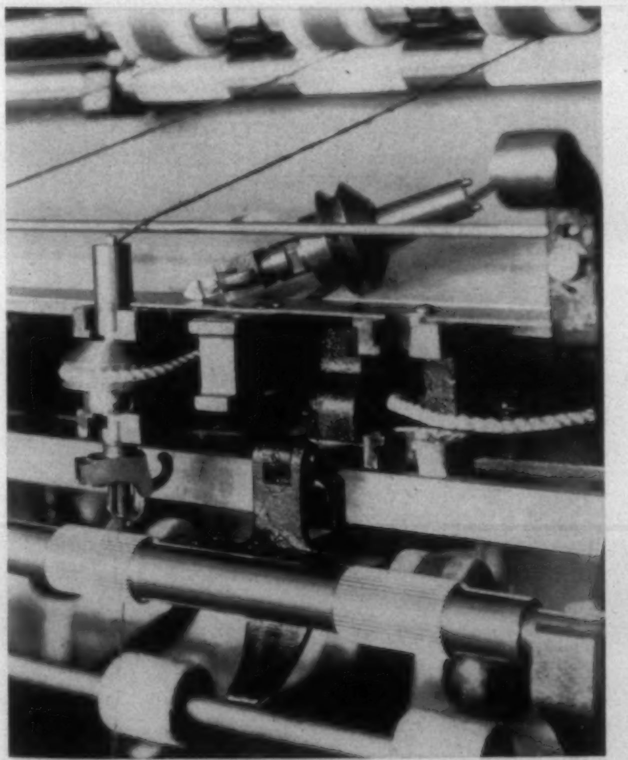


Fig. 2-9—Close-up of a false twister head. ***(Courtesy of Whitin Machine Works.)***

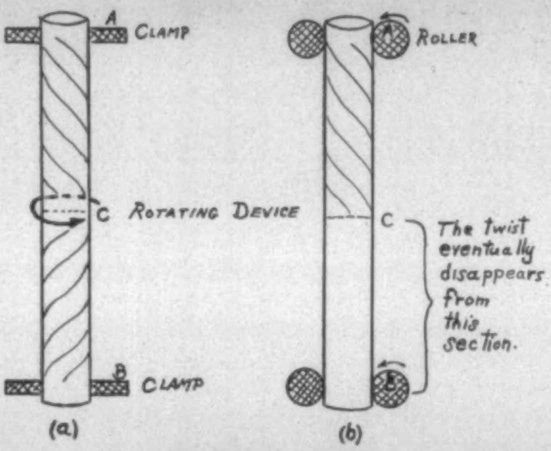


Fig. 2-10—False twist.

A much simpler device also used to reduce ends down by imparting false twist to the yarn consists of an endless belt which travels around the frame just above the thread guide. This belt moves at right angles to the axis of the yarn and thereby gives a rubbing action to the yarn which causes the yarn to twist as the yarn moves from the front rolls to the thread guide. This device has been under development at Clemson College, Clemson, S. C., and the results so far are encouraging.

The term "false twist" used above is not generally understood and the following explanation should clarify how this effect is obtained. Suppose a strand of fibers is held at two points, *A* and *B* (see Fig. 2-10). This strand can then be rotated at an intermediate point *C*. This causes twist to be inserted in the part *AC* in one direction and in the part *CB* in the opposite direction. All parts of the strand will then have a strong twisted arrangement, even though the net amount of twist between the extremities is zero, hence the term "false twist." Such an arrangement is obviously useful for imparting strength to a strand of fibers from one part of a machine to another when it is difficult to insert real twist. The utilization of the ideal, however, is not so simple when the grips at *A* and *B* have to take the form of pairs of rollers through which the strand is being continuously passed.

Let as assume that $AC = CB =$ four inches, and that initially there are eight turns of S twist in *AC*, and eight turns of Z twist in *CB*. In such a case, the amount of twist would be the same in both halves of the strand and would be equal to two turns per inch. Now consider what happens when the strand travels one inch through the rollers in the direction indicated by the arrow. To maintain the same amount of twist in the top section, the strand must be made to rotate through two revolutions at position *C*, thereby putting two turns of twist into the inch of fibers that has just entered through the rollers *A*. But in the meantime these other things take place:

(1) Two complete turns of S twist in the top section

passes through *C* into the bottom section where it immediately neutralizes two of the Z twists there and reduces their number to two.

(2) This loss is made good by the revolution of the strand at position *C,* which while putting two turns of S twist into the top section, also puts two turns of Z twist into the bottom section. Thus, (1) and (2) together produce no change in the situation.

(3) While the above is taking place, one inch of the strand passes out through the rollers *B,* and the twist that it contains disappears from the system.

This is a net loss to the twist between *C* and *B* and there is no compensating gain. Thus, each time a twist disappears through *B,* the turns in *CB* are reduced. In the end there are none left at all, and that is exactly what we find in practice. Whatever twist there is between *A* and B is confined to the part *AC.* That being the case, in order to provide fiber cohesion throughout the whole of the length of strand under consideration, the false twisting device *C* must be placed as close to the rollers *B* as is possible.

Several kinds of devices are used in conjunction with ring spinning to prevent the yarn from ballooning out. These devices thereby reduce the centrifugal forces which in turn reduces the yarn tensions which cause the yarn to break. Flat separator plates are used between adjacent spindles in this country but, in England, hoops have been used for some years to reduce the ballooning when ring spinning worsted yarns. In the United States, Saco-Lowell Shops has recently introduced this technique on its Gwaltney frame for the "node-spinning" of cotton yarns (Fig. 2-11). An additional advantage of this balloon control is that spindles may be placed closer together without danger of tangling of the yarns from adjacent spindles. This reduced yarn tension has been a major factor in allowing larger packages of yarn to be spun.

Many manufacturers of spinning equipment for staple fibers are inclining the drafting mechanism so that the nip of the front rolls is pointed at the center of the spindle. Such a design allows the twist to travel up the yarn right to the point where the fibers are first being released. This will allow the fibers to be twisted into a strong strand as soon as they are free of the front rolls where in the older methods the fibers would often move half an inch before being appreciably twisted since the forces producing twist could not overcome the frictional forces of the fibers against the bottom front roll. This principle is utilized by Saco-Lowell in its Gwaltney frame.

In most types of ring spinning for cotton fibers, the spindle does not have any vertical movement and the ring is traversed up and down in order to wind the yarn onto the package. Such an arrangement causes a continual variation in the size of the balloon with consequent variations in tension. This makes it impossible to select the optimum weight of traveler and speed of operation. In order to overcome this defect, a number of experimental frames for cotton and most of the ring spinning frames used for worsted yarn have been manufactured in which the ring rail is held stationary and the spindles are given the necessary vertical traverse. This method is used in the Whitin Model E wool spinning frame as shown in Fig. 2-12. Another method of obtaining a constant balloon length is to use the present traversing ring rail and stationary spindle but to raise and lower the drafting rolls in synchronization with the ring rail. This has been done on the high draft worsted ring spinner built by McGlynn, Hays & Co.

The forces that act on the yarn to produce tension are complicated and have never been completely resolved into

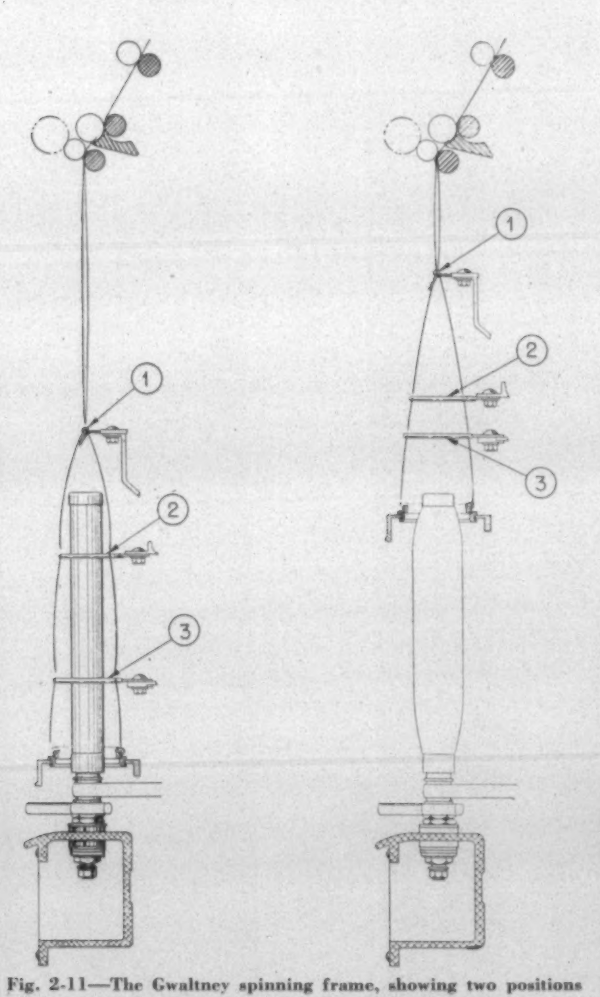


Fig. 2-11—The Gwaltney spinning frame, showing two positions of the ring rail. ***(Courtesy of Saco-Lowell Shops.)***

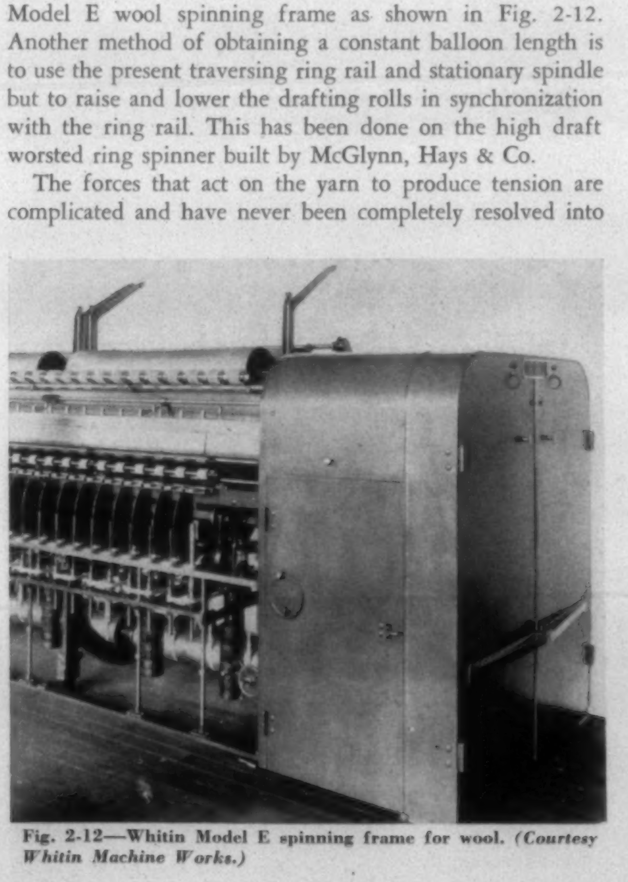


Fig. 2-12—Whitin Model E spinning frame for wool. ***(Courtesy Whitin Machine Works.)***

mathematical equations, but the most exact calculations to date have been worked out for cap spinning by Margaret Hannah at the University of Leeds. Many of these forces increase as the square of the rotational speed and this rapid build-up in tension with speed puts an upper limit on the speed of operation for most twisting processes. The actual air drag seems to be proportional to the 1.7 power rather than the two power as shown by data published by the Wool Industries Research Association.

Among the forces that would seem to be dependent on the square of the speed, the following produce yarn tension: Fg, the friction of the yarn through the thread guides and balloon separators is equal to the coefficient of friction times the centrifugal forces. The centrifugal force is proportional to the yarn weight times the square of its rotational speed (r.p.m.) times the radius of its path: or $\text{Fg} = \text{C.F.} \times \text{N} \times (\text{r.p.m.})^2 \times \text{r}$.

Fa, the friction of the yarn through the air is probably proportional to the square of its speed. It should be noted that the air friction which must be counter-balanced by yarn tension is similar to the friction encountered in a fan which causes the power consumption of the fan to increase as the square of the fan speed.

Fc, the centrifugal force tending to make the yarn balloon is proportional to the square of the speed as discussed above. It also should be noted that this force is reduced by having a smaller balloon radius and a lighter weight of yarn. Thus, it is to be expected that the lighter yarns can be spun at higher speeds and that the use of several small diameter rings for balloon controllers (as in the case of the Gwaltney frame built by Saco-Lowell) will give reduced yarn tension and, therefore, superior performance.

Ft, the drag of the traveler on the ring is proportional to the coefficient of friction of the traveler against the ring times the forces pressing the traveler against the ring. These forces are those derived from the yarn as discussed above and also the centrifugal forces derived from the whirling traveler itself. Thus, the drag of the traveler must be approximately proportional to the square of the rotational speed. A number of authorities believe that this traveler drag is the principle force contributing to the yarn tension. In order to reduce it to a minimum, special designs to allow for lubrication and non-binding have been incorporated into a number of rings and travelers.

A very interesting aspect of yarn tension is the result of the force which the yarn must exert in order to overcome the traveler drag.

The tension in the yarn is what pulls the traveler around; however, this tension is not constant, but varies in inverse proportion to the winding on diameter. This phenomenon is explained as follows referring to Fig. 2-13. If R is the traveler on the ring, an approximately constant tangenital force, RP, is required to pull the traveler. This force is obtained from the yarn tension RB between the traveler and the bobbin. The force RB on the traveler may be resolved into two components, one acting in the direction RP and the other acting in the direction RC and tending to reduce the centrifugal force on the traveler. Examining the vector diagram RPBC, it is seen that:

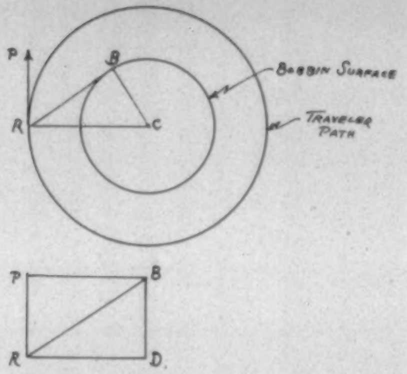


Fig. 2-13—In ring spinning the tension of the yarn decreases as the bobbin diameter builds up.

$$\text{RB} = \frac{\text{RP}}{\text{Cos } \angle \text{ PRB}}$$

Since RPB and RBC are similar triangles

$$\angle \text{ PRB} = \angle \text{ BCR}$$

$$\text{Therefore RB} = \frac{\text{RP}}{\text{Cos } \angle \text{ BCR}} = \frac{\text{RP} \times \text{RC}}{\text{BC}}$$

The radius of the ring RC, and the traveler drag RP are constant, but the bobbin diameter BC is constantly changing. Therefore, the yarn tension RB must constantly change and as the diameter of the bobbin increases, the yarn tension decreases.

In order to compensate for this change in yarn tension, the spinning frame can be operated with a variable speed motor so that the frame is started up slow and the speed is increased as the bobbin diameter is built up. This principle is utilized in the McGlynn, Hays & Co. worsted ring spinner mentioned above.

Something Different In Textile Education—North Carolina's Vocational Textile School

By R. J. KISSIAH, Field Editor

WEAVER to loom fixer . . . doffer to overseer . . . unemployed to machinist . . . shop helper to master mechanic . . . yarn packer to assistant superintendent . . . shipping clerk to superintendent, etc.

These are actual advancements made by various graduates of one of the most unique schools in the U. S.—the North Carolina Vocational Textile School, at Belmont. A state-supported institution, N.C.V.T.S. offers courses in

Scenes from the yarn manufacturing, weaving and mill maintenance departments of the North Carolina Vocational Textile School.

yarn manufacturing, weaving and designing, knitting, tailoring and mill maintenance. The school was created by the North Carolina General Assembly in 1941 as a special area vocational school for textiles. It is operated by a special board of trustees appointed by the governor of North Carolina. It is located in the heart of the textile district it serves as a convenience for those who for one reason or another cannot pursue work for a degree at the N. C. State College School of Textiles at Raleigh.

The student body, which averages 250 students each term, is made up of (1) high school students who plan to make a career in the textile field; (2) mill employees seeking to bolster their job experience or qualify themselves for other positions and departments; and (3) special students who want to qualify for particular jobs—such as machine operators, salesmen, etc. The high school students receive course credit toward a high school diploma for work completed at the school. Special students, since they take less than the full course, may take only as much study as fits their personal requirements. Currently almost half of the student body is composed of World War II and Korean veterans enrolled under the Veterans Administration for Institutional Training.

The school is open to any resident of North Carolina who has a minimum elementary school education and is 16 years of age or older. (When enrollment permits, the school will accept out-of-state students; however, necessity limits this to ten per cent of the total enrollment figure. Out-of-state students are charged a slight tuition fee in addition to paying for their books and supplies.) There is no tuition fee for non-veterans. Students pay only for their textbooks and personal tools. Diplomas are awarded to each person completing a course.

The North Carolina Vocational Textile School instructional staff. *Left to right*, George C. Bumgarner, Herman D. Beauchamp, James A. Kinard, Ivey C. Morris, Ralph R. Johnston, Principal C. E. Folk, Richard M. Jackson, Booth W. Gillespie, Coy E. Martin and Robert Q. Russell.

Classes are scheduled in shifts from 8:20 a. m. to 6:30 p. m. daily Mondays through Fridays. Special hours may be arranged to meet personal requirements. Each course is divided into two sections, fundamental and advanced, and each section requires approximately ten months to complete.

As for plant machinery, the school is well equipped in every department. Some of the machinery was provided by the state, while a substantial portion of the equipment was donated by mills interested in the school's development.

The yarn manufacturing department is equipped with the following: One combination opener and picker; one Whitin card and one Saco-Lowell card; one sliver lapper; on ribbon lapper; one six-head comber; one four-delivery drawing frame; two nine-inch by 4½-inch Interdraft slubbers; one seven-inch by 3½-inch fly frame; one set grinding rolls; one Whitin spinning frame, 48 spindles set to spin numbers 30s to 60s; one White frame, 48 spindles, set to spin numbers 9s to 20s; one Saco-Lowell frame, 48 spindles, set to spin numbers 30s to 60s; one Saco-Lowell frame, 156 spindles, set to spin numbers 30s to 60s; one Dobson and Barlow mule spinning frame, 100 spindles; one Foster winder, 20 spindles; one Whitin twister, 40 spindles; one reel winder and one Sipp-Eastwood winder. All machines are individually motor driven.

The department also has a testing laboratory equipped with a Saco-Lowel sliver tester, one Uster evenness tester to test sliver, roving and yarn, a Scott skein tester, a Scott single strand break tester, reels for sizing both yarns and rovings, and a twist counter.

Subjects offered in the yarn manufacturing department include cotton classing and cotton sampling; opening, cleaning and picking; carding; combing; drawing; roving; spinning frames; textile mathematics; and accident prevention. Course One of the department is devoted to the purpose and functions of the machines while advanced Course Two deals with adjustments, speeds, settings, gear calculations, research and testing, and different types of machines. The time a student remains on any phase of a course is dependent solely on his ability to master the material.

The weaving and designing department is equally well equipped with one Whiting-Schweiter automatic filling winder; three spindles; two Draper X-2 looms; one Draper towel loom; two Draper X-D looms; four X-Model Draper looms; one C-Model Draper loom; one Crompton & Knowles Cotton King loom; one C & K C-6; one C & K S-3; one C & K S-5; one C & K C-4 with jacquard head;

one No. 3 Uster tie-in machine; one Sipp horizontal warper; extra reeds, heddles, warp beams, three drawing-in frames, and a large designing board that can be raised or lowered to accommodate different size designs.

The weaving department uses on its looms synthetic yarns as well as the yarn produced in the yarn manufacturing department. The weaving courses offer such subjects as yarn numbering systems; weave room calculations; cloth analysis, plain cloths; designing plain cloth; weaving; loom fixing; dobby head; and accident prevention. During the course the student can learn any weave room function from sweeping to figuring weave room calculations involving percentages or tearing down and rebuilding a dobby head.

The mill maintenance department has a variety of lathes, grinders, milling machines, shapers, drill presses, gear hob and gear shaper, power, rip and band saws, one Hobart D.C. arc welder, one natural oxygen-acetylene welder, a wood lathe, jointer and jig saw. A well-stocked tool room has all the necessary hand tools for machine shop, wood work, sheet metal, welding, electrical and acetylene. Bench work, drilling and reaming, lathes, milling and shaping, grinding, pipe fitting and accident prevention are subjects offered in Course One. Course Two includes pattern making, power, shop math, gears, and supervisory training.

The tailoring department offers such subjects as care and use of tools, pocket making, trouser construction, working from drafts, measuring, drafting, cutting, and busheling in the fundamental course and vest making, coats and overcoats, materials and colors, and supervisory training in the advanced course. Tailoring equipment includes 15 No. 31-15 Singer electric sewing machines, one serging machine, two 16-pound electric irons, two pressing boards, one button hole cutter, three cutting and designing tables and a variety of accessory equipment.

The school is also equipped with a dye laboratory, which is under the supervision of the knitting department. The dye laboratory has one ten-pound package dye machine, one 25-pound skein and hosiery paddle-type dye machine, one centrifugal extractor, one steam table, 12 beakers for matching shades, one electric oven for drying, and a pair of scales for weighing dyes. All of the socks knitted in the department are dyed in the laboratory, including cotton, cotton-rayon, cotton-Orlon and cotton-nylon. The full-fashioned and seamless ladies hose are not dyed in the laboratory because of insufficient steam pressure for the dye machine.

The school is currently staffed with eight full-time instructors and two part-time instructors. They are: Robert Q. Russell and Richard M. Jackson, yarn manufacturing department; Ivey C. Morris and Booth W. Gillespie, weaving and design; Coy E. Martin and Cecil N. Lawing, knitting; Herman D. Beauchamp, James A. Kinard and George G. Bumgarner, mill maintenance; and Ralph R. Johnston, tailoring. Chris E. Folk is the school principal. Mrs. Lily H. McGee serves as secretary.

Will The South's First Basic Wool Treatment Plant Start A Trend?

– STAFF PREPARED –

THE announcement that Nichols & Co. Inc., Boston, Mass., will build a $3,000,000 basic wool treatment plant at Johnsonville, S. C., has been greeted with the optimistic speculation that the nation's largest processor of raw wool will eventually induce a substantial portion of the nation's woolen and worsted industry to come South.

L. W. Bishop, director of the Research, Planning and Development Board, State of South Carolina, whose group has worked hard for the move, has declared that it is "easy to foresee" a Southern woolen industry "ranking in importance with that of New England and perhaps overshadowing it." Historically the wool business has centered in New England, with the port of Boston as its hub. "Other wool treatment plants are almost sure to come," said Mr. Bishop, "and following them the woolen and worsted spinning and weaving plants . . ."

The Nichols firm is the oldest company in the wool combing business, having been founded as Hills & Nichol in 1898. It became Nichols & Co. in 1926. The new South Carolina branch will be known as the Wellman Combing Co.

Arthur O. Wellman, principal owner of Nichols & Co., said the new plant will be only the first unit and that it will process about 20,000,000 pounds of wool per year. The first unit will employ more than 250 persons, he said, but eventually production of 80,000,000 pounds a year is anticipated with a corresponding increase in the number of units and employees. Processing of 80,000,000 pounds would supply 70 per cent of the wool tops now being used in the Southeast.

In the process operated by the Nichols firm, the raw wool is cleaned, combed out, and accumulated in circular packages called "tops." It then goes to the manufacturer for spinning. In cotton textiles, the operation is comparable to the opening, blending, picking and carding processes of raw cotton. The packages of "tops" are similar to cotton sliver.

The new plant will make the Port of Charleston a significant port of entry for wool. Raw wool from all over the world will be shipped to the new plant and Charleston already has provided ample storage space and a fumigation plant. The U. S. Department of Commerce has provided inspection facilities. A wool exchange at Charleston is another future possibility.

The development of a Southern port of entry for wool will make it economically feasible for smaller manufacturing plants to settle in the Piedmont section. Woolen and worsted spinning and weaving can be done success-

Gov. James F. Byrnes of South Carolina entertained at a luncheon last month at Columbia for Arthur O. Wellman, president of Nichols & Co., his son, John G. Wellman, and interested officials, upon the occasion of the announcement of Mr. Wellman's new wool treatment plant at Johnsonville. In the picture are *(left to right):* Julien D. Dusenbury, Florence legislator; Morgan Rogers of Lockwood Greene Engineers, Spartanburg; George S. Harrell; Philip B. Finklea and Philip H. Arrowsmith, Florence legislators; L. W. Bishop, director, State Research, Planning and Development Board; John Wellman; Charles E. Daniel, Greenville contrator; Governor Byrnes; Arthur Wellman; Senator W. Clyde Graham, Pamplico; Joseph B. Clements Jr., Florence legislator; Warren White, assistant vice-president of the Seaboard Air Line Railway; and Clement Haynesworth, Greenville attorney.

fully by small manufacturers, provided they are close to a wool port of entry.

The importation of wool from markets all over the world involves large banking transactions. Nichols & Co. may in some respects be compared with the cotton broker and semi-manufacturer. The company buys the raw wool months in advance according to market conditions. Oftentimes, considerable capital is invested in wool still on the sheep's back in Australia or Wyoming. Few wool manufacturers would find it practical to tie up their capital for such long periods.

Then, too, the purchasing, blending and scouring of wool is a complex undertaking that requires years of experience. Proper blends are essential to the end product. It will be the function of the Nichols & Co. plant to furnish the manufacturer with these specified blends. And the establishment of the plant at Johnsonville will enable Nichols & Co. to furnish the Southern worsted mills with topping at an estimated saving of several cents per pound.

Mr. Wellman said the Johnsonville site was chosen because of its ample supply of pure, soft water, adequate labor source, and its nearness to the port of Charleston on a direct line of the Seaboard Air Line Railroad.

The plant site covers 200 acres in Florence County, approximately 86 miles northeast of Charleston. It lies on the south bank of the Lynches River one mile north of Johnsonville. With a population of 700-800, Johnsonville has been a quiet "small town" trading center in the heart of a traditional cotton and tobacco region. The town mayor was instrumental in the negotiations for the plant site and he has promised wholehearted support of the townspeople in giving the Nichols company a warm welcome.

The building will have approximately 150,000 square feet of floor space, of one-store modern design with air-conditioning throughout. Daniel Construction Co. of Greenville, S. C., are the contractors, and Lockwood Greene, New York and Spartanburg, S. C., are engineers. Construction on the building will begin soon and it is expected to be ready for occupancy by July 1. The plant will be equipped with top making machinery now being used by the Providence Combing Co. The Providence company is liquidating its plant at Olneyville, R. I., at the present time.

Among nationally known manufacturers of woolen and worsted goods to establish plants in South Carolina in recent years are Deering-Millken, Berkshire, J. P. Stevens, Abbott and Southern Worsted.

U. S. Influence In Wool Markets Declines

Increased purchasing of wool by countries which in the past have not been large consumers has offset reduced United States' activity in overseas markets to keep wool in a firm statistical position, the Wool Bureau reported recently in a review of the world wool outlook.

United States' woolen mills are definitely in an open-to-buy raw material position, the bureau says, but have been postponing inventory purchases because of the unfavorable trend in new business since last Spring, and the anticipation of possible reduced international competition for available supplies of wool.

Nevertheless, the bureau continues, the indisputable fact is that the world's wool supply is being sought by more countries and, therefore, is being spread more evenly. This, it adds, should give pause for thought to those who, by past experience, have postponed purchases during a highly competitive season in the expectation of subsequent weaker markets.

The bureau notes that shifts in the geographic distribution of world wool imports indicate that the United States may not continue to be as important a force in the world wool market as it has been in the past. The bureau cites these significant facts in the changing wool import picture:

(1) The United States increased its take of the world's wool trade from 11 per cent in the pre-war period 1935-39 to 31 per cent in the post-war period 1946-51, rising from fifth position as an importer to first position. In 1952 its take fell to 23 per cent of world trade and its position to second, with the United Kingdom as a leader.

(2) The seven leading countries (United Kingdom, United States, France, Italy, Japan, Belgium and Germany)

are taking a declining combined share of total world wool trade, reflecting increasing industrialization or rising standards of textile consumption in other countries. In 1952, the rest of the world took nine per cent of total exports, a rise from six per cent of the total in 1946-1951 and from three per cent of the total in 1935-39. This trend is likely to continue in the near future and, incidentally, to result in some contraction and significant shifts in world trade in processed wool and wool manufactures.

(3) Of the seven leading importers, the United States is the only country which imported less wool in 1953 than in 1952. All the others increased their imports substantially, in varying degrees. If it is assumed that partial year changes will be representative of the entire year 1953, the United States' share of total world trade will undoubtedly be significantly lower than in 1952. However, it will still be the second largest importer.

(4) Significant shifts are taking place in the relative importance, as wool importers, of major consuming countries other than the United States. This is more readily appreciated from a comparison of estimated 1953 imports of these countries with their average imports during 1946-51. The United Kingdom emerges as a giant with its imports 51 per cent higher. The United States is an isolated but distant runner-up to the United Kingdom with its imports 39 per cent lower. The remaining five countries have become close competitors as a result of major gains in Italy, Germany and Japan especially.

On the basis of combined reports from 11 countries, including the United States, the rising trend of world wool consumption was halted in the third quarter of 1953, the bureau continues. Granted that this may mark the initial stage of a lower rate of world wool consumption, available supplies during the current season are at least 110 pounds, clean basis, lower than last season's, the bureau notes. It cites the Commonwealth Economic Committee's estimate that the total available supply of wool will be 2,669 million pounds, clean basis, in the current season, as opposed to 2,779 pounds in 1952-53. The committee's totals exclude the United Kingdom stockpile.

At the same time, the bureau points out that the current Australian clip is likely to be smaller than last season's, instead of larger, as originally estimated. Even if offsetting increases should develop in revised estimates of other countries' clips, the reduction in Australian types of apparel wool would tend to be an inflationary market factor.

With world trade stocks on the low side and no abnormal carryovers in sight, such as last season's in South America, consumption must necessarily adjust itself to the lower supply situation, the bureau says. In contrast to possible declining consumption in Western Europe, a gain in consumption is anticipated behind the Iron Curtain in efforts to implement the new policy of consumer goods expansion.

Metlon Develops Spun Metallic Yarn

A major development in the manufacture of non-tarnishing metallic yarns is Metlon's new spun metallic fiber, it was announced recently by Arthur C. Brucks, president of the company.

Playing a vital role in the development of this staple yarn is Metlon's ability to cut the finest metallic yarn yet produced. It is this narrow width which has acutally made possible a yarn containing metal to be spun with other fibers. Successful yarns already have been made on the cotton and worsted system of spinning. To date, the resulting yarns have contained a percentage of Metlon ranging from four to eight per cent, enough to give a subtle, random metallic effect which cannot be reproduced by varying the weave with the flat filament type metallic yarn.

Arthur C. Brucks, president of the Metlon Corp., shows the company's new staple metallic yarn which makes it possible to spin a yarn containing metal with other fibers.

One of the main advantages of the staple yarn is that of effect. It will also enable the weaver to incorporate metallic in many ranges of fabric where it has not been used before. Further, a metallic look can now be achieved on any loom. Previously, producers of volume fabrics of many types, not owning box looms, were limited to warp metallic effects. The spun metallic can be used as a single filling yarn with varying degrees of glitter, depending on the percentage used in the spun yarn.

The metallic staple can be used with cotton, wool and the synthetic blends to produce yarns for many fields. Of particular importance are men's suitings, where both mill and manufacturer have expressed a desire for fabrics incorporating the subtle use of metallics. It is expected that the staple yarn will also bring to fruition last year's trend for metallic woven suitings in women's wear.

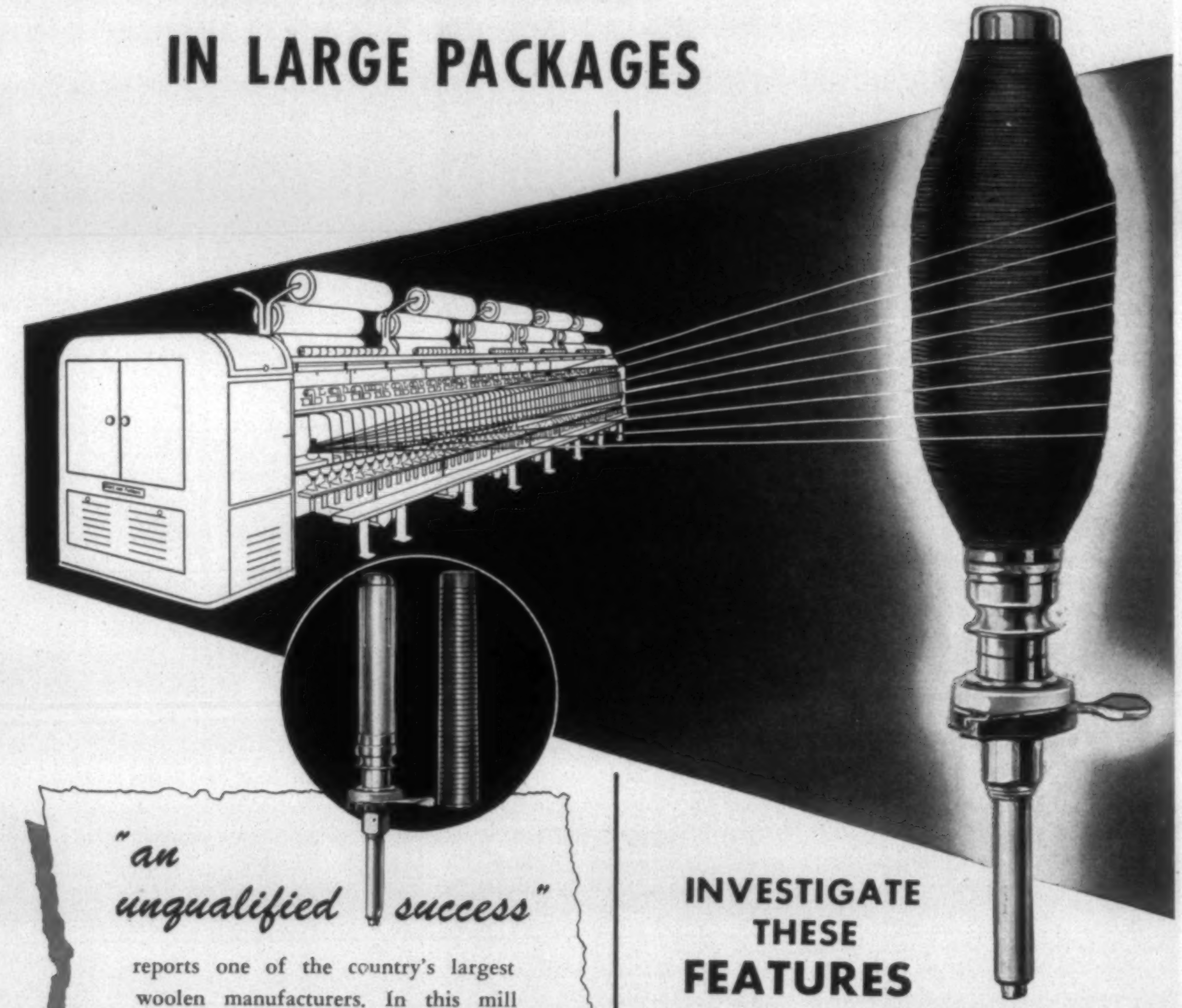
In addition, there are strong indications that there will be a wide use of the staple fiber in men's hosiery, gloves, mufflers, knitted trimmings and outerwear, as well as in these related items for women. In textiles for the home furnishing industry, drapery, casement and upholstery fabrics all lend themselves to the use of spun Metlon.

The staple yarn is being delivered at present in gold and silver, in any desired staple length, and it is planned to expand delivery to include Metlon's range of 16 colors.

The spun metallic is expected to have a wide influence in novelty yarns and a great deal of interest has already been evidenced by novelty yarn producers and knitters seeking ways to expand their range of metallic effects. A number of them have co-operated with Metlon's research and development department to bring this new use to completion and the company is now prepared to furnish the staple metallic to the many spinners who are working along these lines.

LOW COSTS COME IN LARGE PACKAGES

THE NEW D & F PAPER TUBE SPINDLE



"an unqualified success"

reports one of the country's largest woolen manufacturers. In this mill many thousands of these spindles have been in constant 24 hour operation for several months, spinning yarns ranging from two to six run. The new tapered tubes are made of laminated impregnated paper. They are strong and accurate and remain so after yarn conditioning. Net weight of yarn on new bobbin runs from *approximately 19 ounces up to 26 ounces.*

INVESTIGATE THESE FEATURES

- Bobbin inventory costs cut 60%
- Greater freedom from knots
- Larger intervals between doffs
- Spindle lubrication approximately every TWO YEARS
- Redesigned brake simplifies piecing up
- Better balance at high spindle speeds

DAVIS & FURBER
MACHINE COMPANY
NO. ANDOVER, MASS. CHARLOTTE, NO. CAROLINA

Measurement Of The Nepping Potential Of Cotton

By J. F. BOGDAN, Director of Processing Research, North Carolina State College School of Textiles

The title of Mr. Bogdan's paper might indicate that it deals exclusively with theory. Actually the paper, delivered during the first session of the fifth annual Cotton Research Clinic Feb. 17 at Pinehurst, N. C., makes known the development of the "Nepotometer," an instrument for predicting the nepping potential of cotton. It is a report of work done under contract with the U. S. Department of Agriculture and authorized by the Research and Marketing Act. The contract was supervised by the Southern Regional Research Laboratory of the Bureau of Agriculture and Industrial Chemistry, U.S.D.A.

THE ability to evaluate rapidly and accurately, from a small sample, the tendency of a cotton to form neps in processing is one which has been long desired by those concerned with the various aspects of cotton: its breeding, growing, distribution, and manufacture into yarn and fabric. Each segment of the industry is anxious to do the best job possible. But desire has no accomplishment. Only after a thorough understanding of the qualities and failings of presently available materials can one suggest areas for concentration on improvement. A cotton bred for improved qualities of fiber length, strength, maturity and fineness may still fail miserably in manufacturing if it also possesses a high "flab factor," that undesirable property which causes one cotton to curl up and die when subjected to the rigors of current manufacturing methods, at the same time that another, with identical fiber characteristics as measured by current tests, will resist the tangling forces.

How fine it would be if the breeder could obtain from the lint in a single boll of cotton some representation of the behavior of this variety in a scheme of average cotton manufacturing; consider the time saved in propagating crosses. One could screen samples and eliminate those that show evidence of possessing an undue aversion to manufacturing machinery.

The merchant, dealing with existing cottons and caught in the crossfire of grower and manufacturer, would certainly appreciate the availability of additional intelligence in the proper evaluation and distribution of his commodity.

The manufacturer, whose technical problems are many along cotton's tortuous road from ginned stock to final fabric, relies on every guide of test and experience to make the journey as quickly and smoothly as possible. The selection of optimum cottons for a particular use, and the proper blending of cottons already at hand on the basis of the predicted behavior of individual bales would allow him time to worry about other matters.

This problem has been recognized for a long time. Its solution would bring such valuable rewards that the United States Department of Agriculture, through provisions of the Research and Marketing Act, gave the project the necessary priority for its contracting at North Carolina State College.

Before discussing our approach to the solution, it may be well to speak a bit about the symptom of manufacturing disease—neps. Neps are aggregates of tangled fibers and caused by the effects of mechanical manipulation. The actions necessary for their formation exist in many forms. The actions of the revolving spindles of the mechanical picker, the saws of the gin, the beaters of a modern opening and picking line are but a few of the more obvious ones. It is rather remarkable that cotton fibers, so minute in cross-section, are capable of resisting these forces as effectively as they do.

Simple mechanics can explain why a coarse fiber is more resistant to nepping than a fine fiber; why a mature fiber, with a rounder cross-section is more resistant to nepping than an immature fiber with its flat, ribbon-like cross-section. But why do fibers with identical degrees of fineness and maturity differ in this respect? The answer must lie in structural differences which are not usually measured. One may consider identical metals in two forms which have the same weight per unit length: one in the form of a rod and one in the form of a chain. The difference in the ease with which they can be bent and entangled is apparent.

Anyone who has observed the effects of reprocessing on the quality of the stock has noted the increase of tangled fibers with the amount of mechanical treatment. Like the

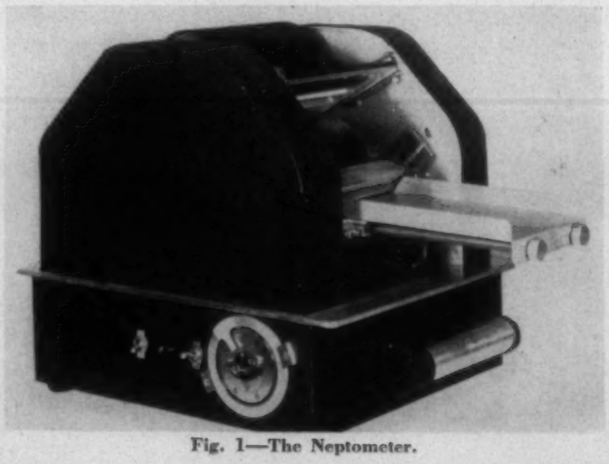
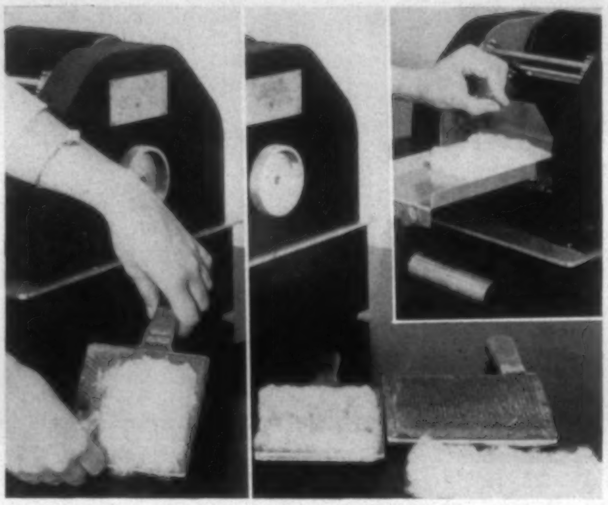


Fig. 1—The Neptometer.



Figs. 2, 3 and 4 *(left to right).*

stonecutter's rock, a fiber may resist 49 blows, only to be shattered into a nep at the 50th.

It is on this principle of repetitive action on the same fibers that the final model of the instrument (the Nepotometer) for predicting the nepping potential of cotton (Fig. 1) is based. It also incorporates the actions of carding and stripping found in a full-scale cotton card.

Basically the instrument consists of a feeding arrangement, three rolls covered with metallic card clothing to manipulate the cotton, a presser plate to prevent fiber plucking at one of the fiber transfer points, a pre-set timer to insure a standard degree of manipulation, a means of transferring a sample of the web for inspection, and the necessary means of actuation in the working direction, and in reverse for the purpose of clearing the instrument after the test is completed.

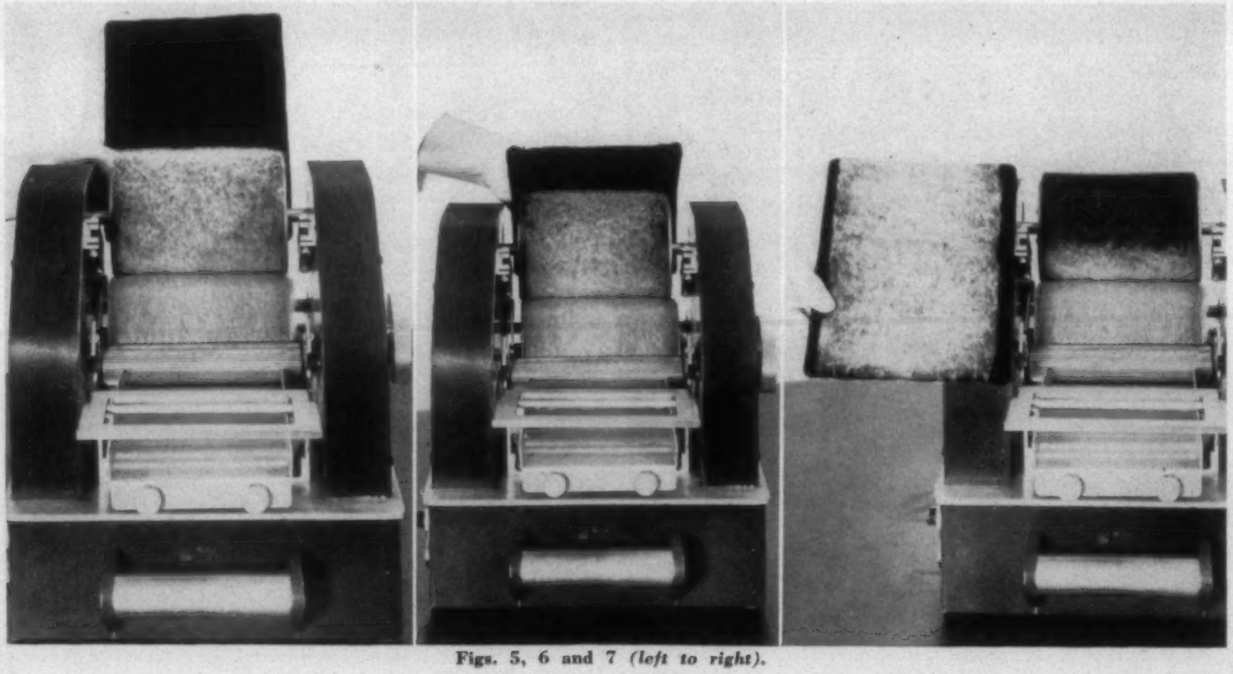
The test method consists of first obtaining an accurately weighed 25-grain sample which is representative of the bale of cotton to be evaluated. This is carded between a pair of hand cards into a pad five by five inches (Fig. 2, 3), and the sample is placed on the feed table and tucked under the feed roll (Fig. 4). The rotation of the mechanism is begun in the working direction with the timer set for four minutes. At the end of this time the machine stops automatically. The presser plate is removed and a piece of cardboard, six by ten inches, covered with black velveteen is placed in contact with the web at the back of the top roll (Fig. 5). By maintaining contact with the web as the board is swung forward (Fig. 6), the sample is made to adhere to a pile of the velveteen. The sample web is broken at the edge by swinging the board away from the roll (Fig. 7).

The sample is set aside and the first bottom cylinder is stripped of excess material by rotating the cylinder by hand in the reverse direction while a hand stripper is held in contact with the cylinder (Fig. 8). A reverse switch permits the three cylinders to rotate in the reverse direction from that during the working cycle, and all of the cotton remaining on the bottom cylinder is transferred by the action of the wires to the top cylinder from where it is stripped readily with a hand stripper (Fig. 9). After the presser plate is replaced (Fig. 10) the instrument is ready to accommodate the next sample which was prepared during the time that the first test was running.

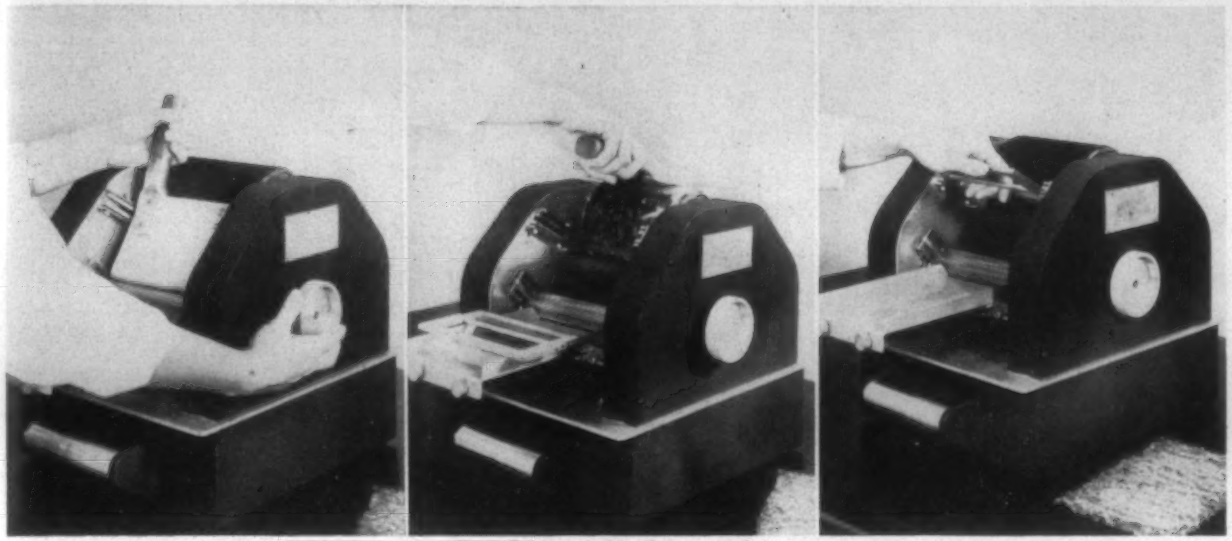
The appearance of the sample web is compared for neppiness against a set of four standard photographs of webs which show a range of neppiness from very low to very high. The average weight per unit area is approximately the same as that for a card web weighing 50 grains per linear yard.

The excellent design of the present model of the instrument is due to Prof. C. M. Asbill, head of the machine development department of the School of Textiles, who, with the writer, is co-inventor of the instrument.

Direction of fiber flow during the feeding cycle is shown in Fig. 11. The fringe of cotton is torn away from the nip of the feed roll and feed plate by the rotation of the



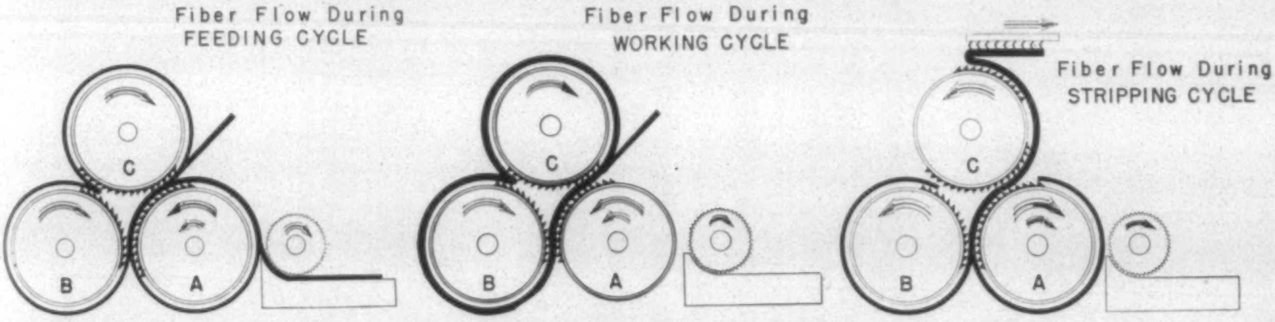
Figs. 5, 6 and 7 *(left to right).*



Figs. 8, 9 and 10 *(left to right)*.

cylinder A which has a relatively high surface speed. Cylinders B and C have the same surface speed, lower than A. As the fibers, held on the wire teeth of A pass roll B, some fibers are transferred to B in a carding action, while others remain on A. Those fibers which are transferred are removed by cylinder C through a stripping action and, in turn, from C to A by a stripping action.

After all the material has been fed into the system, the fiber flow is illustrated in Fig. 12. The fibers are worked from C to A to B, back to C as long as desired. The presser shown near the nip of cylinders A and C tends to retard the very easy transfer of fibers from cylinder C and prevents plucking of fibers, thus permitting the production of a more uniform web. At the end of the test when it is desired to clear the instrument, the rolls are reversed and the fiber flow is described by Fig. 13. Cylinder B strips all fibers from the underside of C. Cylinder A, because of its higher surface speed, brushes fibers from B and impales them on the points of cylinder C, from which they are removed by a hand stripper.



Figs. 11, 12 and 13 *(left to right)*.

Saco-Lowell Shops Reports 1953 Earnings

While the textile machinery business continued at a depressed level, Saco-Lowell Shops was able through operating economies and a better volume of defense business to report increased earnings for the fiscal year ended Nov. 29, 1953. According to the company's 1953 annual report, net income amounted to $1,374,312 or $2.29 a share, as compared with $57,974 or ten cents a share in the previous year.

Cash dividends of $600,000 or $1 a share were declared during the year on the 600,000 common shares presently outstanding. This rate was unchanged from the previous year.

Malcolm D. Shaffner president of the company which has headquarters in Boston, Mass., reported to stockholders that despite the increase in earnings many of the operating problems faced by the company a year ago have been intensified and that the plant relocation and product diversification plans dictate a policy of financial caution.

Mr. Shaffner noted the unfavorable conditions throughout the textile machinery industry and said that competition from foreign manufacturers is increasing.

Cotton Control Law Signed By President

President Eisenhower on Jan. 30 signed a cotton control bill designed to cut down on the U. S. cotton surplus. The new bill cuts U. S. cotton acreage to a maximum of 21,379,342, nearly four million acres less than last year.

The 1953-54 crop, according to a recent estimate by the Agriculture Department, is expected to total 36,800,000 bales—the largest except for the 39 million bales of 1937-38. Consumption in 1952-53 ran about 3½ million bales below production, the department reports, and is not expected to go up.

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3-2

Warp Preparation & Weaving

MODERN FABRIC ANALYSIS

By LEONARD MAUER and HARRY WECHSLER, Textile Engineers

IN focusing eager attention on the gigantic strides assumed by man-made fibers as they developed from the early experimental stage to their present recognized acceptance, we have too often centralized our concentration on the fibers themselves. In doing this, we tended to have ignored the essential qualities of fabric construction. It is these qualities that are of primary importance in the ultimate success a fabric may enjoy in our highly progressive textile market.

Today, a consumer may shrug his shoulder, or nod his head in humble acquiescence, while inspecting textile merchandise prior to his purchase. In his "feeling" for a desired "hand," or while appreciating a warm dye effect, he may apportion little consideration to the essential characteristics of fabric composition and structure, inherent qualities that are responsible for the ultimate, and tangible performance that is normally expected of a textile fabric or product thereof.

Our modern mills, too, may bear the guilt by reason of poor foresight. For only too often, their programs for scientific textile fabric analysis and development, normally concentrated on attaining fabrics of prime qualities, are lost in their preoccupation with capitalization on catch words and selling techniques.

Truly said, most fabrics are purchased today with an assumptive confidence in the manufacturer, thinking for example: "Certainly he will not ignore the basic elements of good fabric structure."

The aim of this presentation is to illustrate the principles and techniques employed in the modern analysis of fabrics. We shall also show how the data obtained by this analysis may facilitate reconstructing and retracing a fabric back to its original state: the loom stage.

Generally speaking, knowledge of the following points are of major importance in a modern fabric analysis program: (1) The face and back of the fabric. (2) The direction of warp and filling yarns. (3) The number of threads per inch in the finished fabric. (4) The weight per yard of the finished fabric. (5) The amount of take-up, contraction and crimp in weaving, expressed as a percentage. (6) The shrinkage in length, and loss or gain in weight in finishing (in the case of woolen fabrics, expressed as a percentage). (7) The yarn counts (size), composing the fabric. (8) The width of the warp in the loom (reed width). (9) The weight of the warp and filling in the gray fabric.

I. *The Face and Back of the Fabric*—Normally, the outward appearance of a fabric would tend to indicate its face and back to any observer. In the final analysis, however, other factors must be considered in this connection.

Since the face of a fabric is of great importance in sales, it will probably receive a better or fancy finish, and will contain more eye appealing qualities than the back of the fabric. Such attributes as textured effects (if desired), more costly yarns, twill lines usually running in a direction from lower left to upper right, and woven colored patterns (when only one side of the fabric has a color pattern, and the other side is plain), would indicate the face of a fabric.

II. *The Direction of Warp and Filling Yarns*—In clarifying this subject, it may be generally stated that the nature of weaving directs any consideration in distinguishing between warp and filling yarns. The following points may be listed in this connection: (a) If the fabric is one having prominent woven stripes, they will usually run in the warp direction. (b) Certain light cotton, or man-made fabrics, when held to a light source, will show reed marks (vertical lines caused by the reed separating the warp threads) that run in the warp direction. (c) Since the warp receives more tension during the weaving operation than the filling yarn, it is usually given a harder twist. (d) If confronted with a plied yarn and a single yarn, the plied usually is the warp (here, too, exception can be found).

III. The *Number of Threads Per Inch in Finished Fabric*—The number of warp ends or filling picks per inch of fabric can be best determined by the physical means of counting the threads with the aid of a pick glass. In certain fabrics (gauze for example) where the basic structure is of a loosely woven nature, the threads may be counted without employing magnifying assistants.

It is advisable that ends and picks in more than one segment of the cloth be counted, so that an average count and consequently a more accurate result be obtained. If the spacing of either system of threads is not equal (in the case of crowded textured fabrics) the threads in more than one inch should be counted.

IV. *The Weight Per Yard of the Finished Fabric*—The accurate weight of either gray or finished fabric may be obtained by weighing samples selected at random from different sections of the fabric to be analyzed. There are two significant methods employed in determining fabric weights. These two methods are (1) the circle weight method, and (2) the square sample method.

The Circle Weight Method—In this method the sample is cut by means of a circular die to a measurement of 1/400ths of a square yard. By weighing several samples on a sensitive scale, we may obtain an average weight which is commonly expressed in the metric system. We may then convert this result into the following factors: (a) ounces per square yard, (b) ounces per linear yard, (c) pounds per 100 linear yards, and (d) yards per pound.

The conversion from one result to another is an easy matter, and we shall illustrate it by the following examples. Let as assume that the average weight of a 45-inch fabric obtained by the circle weight method is 0.2478 grams per circle, then:

(a) $$\text{oz./sq. yd.}—\frac{\text{weight of one circle}\times 400}{28.3}$$

$$\frac{0.2478\times 400=3.50\text{ oz}}{28.3}$$

One circle is 1/400th of a square yard
One ounce is equivalent to 28.3 grams
The fraction $\frac{400}{28.3}$ can be reduced to the constant 14.13

(b) $$\text{Ozs. per linear yd.}=\frac{\text{oz./sq. yd.}\times\text{width of fabric}}{36''\text{/yd.}}$$

$$\frac{3.50\times 45''=4.38\text{ oz.}}{36''}$$

(c) $$\text{Linear yards per pound}=\frac{16}{\text{oz./lin. yd.}}$$

$$\frac{16=3.65}{4.38}$$

there are 16 ounces per pound.

(d) $$\text{Lbs. per 100 lin. yds.}=\frac{1\times 100=27.4\text{ lbs.}}{3.65}$$

The Square Sample Method—In the square sample method, the sample is obtained by cutting along the fabrics' ends and picks, thus obtaining a square or a rectangle. The method of weighing is the same as employed in the circle weight method:

(a) Pounds per 100 linear yards.

$$\frac{\text{Finished width}\times 36\times 100}{453.6}\times\frac{\text{wt. of samples in gms.}}{\text{no. of sq. ins. weighed}}$$

$$\frac{45''\times 36''\times 100\times 0.1534=27.4}{453.6\times 20}$$

453.6 is to convert from metric weights to pounds: 1 lb.=453.6 grams.

(b) $$\text{Linear yds. per pound}=\frac{1\times 100}{\text{lbs./lin. yds.}}$$

$$\frac{1\times 100=3.65\text{ yds.}}{27.4}$$

(c) $$\text{Ounces per linear yard}=\frac{16}{\text{lin. yds./lb.}}$$

$$\frac{16=4.38\text{ ounces}}{3.65}$$

(d) $$\text{Ozs. per sq. yd.}=\frac{\text{oz./lin. yd.}\times 36''}{\text{width of fabric}}$$

$$\frac{4.38\times 36''=3.50\text{ ounces}}{45''}$$

V. *Amount of Take-up in Weaving*—The take-up in weaving is caused by the bending of the warp ends over or under the filling threads. It depends upon: (a) the yarn count, (b) the number of interlacings, (c) the number of ends per inch with relation to the number of picks per inch, and (d) tension on the warp yarns.

The take-up is expressed as a percentage of the length of a thread in a woven fabric to the stretched length of the same thread when removed from the fabric.

Assume that the nine-inch length of a thread in a woven fabric was found to be ten inches when removed from the fabric, and a stretch applied to it. The stretch had been to such a degree that the contraction or take-up in weaving had been removed. The take-up will be:

$$\frac{10''-9''\times 100=10\%\text{ take-up.}}{10''}$$

VI. *Percentage of Shrinkage*—During the finishing operation, most woven fabrics have the tendency to shrink in length and contract in width. This phenomena will cause an increase in the texture of a fabric. The amount of shrinkage is expressed as a percentage between the loom length or width of the fabric, relative to its length or width after finishing. In woolen fabrics the percentage shrinkage is greater than in other types of woven fabrics.

Let us assume that a woolen fabric measured 40 yards after weaving, and only 36 yards after finishing. The shrinkage will therefore be:

$$\frac{40''-36''\times 100=10\%\text{ shrinkage}}{40''}$$

VII. *Yarn Counts Composing the Fabric* — There are many methods recommended for the determination of yarn counts, but one quite often used in the industry will be illustrated in the following example: assume that our sample is 45 inches wide (from selvage to selvage) and 18 inches long, and we wish to determine the warp and filling yarn counts.

(1) *Filling yarn count*—Since we have a full width sample we shall start with the filling calculations: (a) unravel the filling yarns; (b) remove a number of picks from the fabric (full length picks), and apply a degree of stretch on them so that the bending caused by the yarn interlacings will be removed; (c) measure the length of each stretched pick, record measurements, and obtain an average length of pick; (d) weigh the removed picks.

Assume that the average length of a full stretched pick was 50 inches, and the original width of the finished fabric was 45 inches; the weight of eight picks was 0.8571 grams. The yarn count of the filling will be:

$$\frac{50''\times 8\times 0.015=7\text{ yarn count, cotton system.}}{0.8571}$$

0.015 is a constant for converting when using the metric system in weighing. The constant is obtained thusly:

$$\frac{1''\times7{,}000\text{ grains}}{36''\times840\times15.43\times1}=0.015$$

7,000 grains per pound.
36 inches per yard
840 yards per pound, standard for the cotton count
15.43 grains per gram
One inch of yarn weighed
One grain

The filling contraction during weaving:

$$\frac{50''-45''}{50''}\times100=10\%\text{ contraction}$$

(2) *Warp yarn calculations*—The calculations necessary for the warp yarn counts are similar to those for the filling yarn count. Our sample is 18 inches long and we shall cut three to four inches (parallel to the selvage) through the fabric, so that we may unravel full length warp ends. (a) Unravel the warp yarns. (b) Remove a number of ends from the fabric and apply a stretch to them so that the weaving contraction will be removed. (c) Measure the length of each stretched end, record measurements, and obtain an average length. (d) Weigh the ends that have been removed.

Assume that the stretched length of an end was 20 inches. The original length was given as 18 inches; the weight of 20 ends was found to be 0.8571 grams, then the warp count is:

$$\frac{20''\times20\times0.015}{0.8571}=7\text{ yarn count, cotton system}$$

The contraction due to weaving operation is:

$$\frac{20''-18''}{20''}\times100=10\%\text{ take-up}$$

VIII. *Width of the Warp in the Loom (Reed Width)*—As explained in Part 7, the stretched length of a pick was found to be 50 inches, and this width will be considered as the reed width, or the width of the warp (fabric) in the loom. In most cases (except woolen fabrics) we can assume that the width of a fabric in the loom is the same as the length of the pick determined in the calculations for the filling yarn count.

If it would be necessary to determine the reed width, then we may calculate for the reed width in the following manner: (a) Cut the same along the warp ends at both ends of the sample so that there will be a uniform length of filling yarns. (b) Measure the length of the filling in the fabric. (c) Unravel a few yarns, apply a stretch to remove the weaving contraction, measure the stretched length, record the measurements and obtain an average length of stretched pick.

Assuming that the finished fabric width would have been 45 inches; the width of our sample 18 inches and an average length of a stretched pick of 20 inches, the loom width will be:

$$\text{Loom width: }\frac{\text{stretched pick length}\times\text{finished fabric width}}{\text{sample pick length}}$$

$$\text{or: }\frac{20''\times45''}{18''}=50''\text{ reed width or loom width of fabric.}$$

Weight of the Warp and Filling—The next important calculation to be made is the determination of the weight of the warp and filling necessary to produce a woven fabric. The data obtained will be that of the weight of the gray warp and filling. (1) Warp weight data: (a) ends per inch in the loom, (b) reed width, (c) percentage take-up, (d) warp yarn count; (2) filling weight data: (e) picks per inch in the loom, (f) reed width, (g) filling yarn count.

Given: 50 ends per inch in finished fabric
40 picks per inch in finished fabric
50 inches in the reed
10 per cent warp take-up
warp and filling yarn count—seven single-ply cotton system.

1. (a) ends/″ in finished fabric×(100—% take-up)

$$\frac{50\times90}{100}=45\text{ ends per inch in the loom}$$

(b) 50″ reed width, if not given it can be obtained as explained in Part VIII.
(c) 10% take-up—given or obtained as in Part V.
(d) Seven cotton count—given or obtained as in Part VII.

2. (e) picks/″ in the finished fabric×(100—% contraction)

$$\frac{40\times90}{100}=36\text{ picks per inch in the loom}$$

(f) 50″ reed width—given or obtained as in Part VIII.
(g) Seven cotton count—given or obtained as in Part VII.

Warp weight expressed in pounds per 100 linear yards:

$$\frac{\text{ends}/''\text{ in loom}\times\text{reed width}\times(100+\%\text{ take-up})}{\text{yarn count}\times\text{standard}}$$

$$\frac{45\times50-\times110}{7\times840}=42.09\text{ lbs./100 linear yds.}$$

(840 is the standard for cotton count)
(100 linear yards)

Filling weight expressed in pounds per 100 linear yards:

$$\frac{\text{picks}/''\text{ in loom}\times\text{reed width}\times100}{\text{yarn count}\times\text{standard}}$$

$$\frac{36\times50\times100}{7\times840}=30.61\text{ lbs./100 linear yards}$$

The total weight of the gray fabric in the loom is 42.06 +30.61=72.70 lbs./100 linear yards.

For cotton fabrics or spun fabrics, the standard used in the calculations of yarn counts and weight is 840. For worsted fabrics, the standard is 560. For woolen fabrics the standard is either 300 or 1,600, depending if the cut or run system is used.

In summation, we shall offer two complete analyses, one on a cotton fabric, and the other on a man-made filament fabric, to fully illustrate the circle weight and square sample methods, and the step-by-step procedure of a complete analyses.

COTTON FABRIC

Circle Weight Method—Finished fabric data: width 45 inches; construction: 36 ends×35 picks.

A. *Weight of finished fabric:* 1 circle weighs 0.989 grams, thus:

$$\frac{0.989 \times 14.13 \times 45''}{36''} = 1.748 \text{ oz./lin. yd. or } 1.75 \text{ oz./lin. yds.}$$

B. *Warp and filling calculations*: (1) Filling contraction—The filling stretched from 45 inches to 49.9 inches, therefore,

$$\frac{49.9 - 45'' \times 100}{49.9} = 9.81\% \text{ contraction.}$$

(2) Filling yarn count—Eight full length picks were measured, and stretched. The average stretched length was 49.9 inches. The weight of eight picks was 0.8433 grams. Therefore,

$$\frac{49.9'' \times 8 \text{ (picks)} \times 0.015}{0.8433 \text{ gms.}} = 7.1 \text{ cot. count or 7 cot. count}$$

(3) Warp take-up—The warp stretched to 20 inches from 19.25 inches. Therefore,

$$\frac{20'' - 19.25'' \times 100}{20''} = 3.75\% \text{ take-up}$$

(4) Warp yarn count—20 ends were measured and weighed. The average stretched length was 20 inches. The weight of 20 ends was 0.8510 grams. Therefore,

$$\frac{20'' \times 20 \text{ ends} \times .015}{0.8510 \text{ grams}} = 7.05 \text{ cotton count, or 7 cotton count}$$

(5) Ends per inch in the loom:

$$\frac{36 \times (100 - 9.81)}{100} = 32.4 \text{ ends, or 32 ends per inch}$$

9.81 per cent is the contraction in the filling; 36 ends per inch in the finished fabric.

(6) Picks per inch in the loom:

$$\frac{35 \times (100 - 3.75)}{100} = 33.6 \text{ picks, or 34 picks per inch}$$

(7) Warp weight:

$$\frac{32 \times 49.9 \times (100 - 3.75)}{7 \times 840} = 28.13 \text{ lbs. per 100 lin. yds.}$$

(8) Filling weight:

$$\frac{3434 \times 49.9 \times 100}{7 \times 840} = 28.83 \text{ lbs. or 100 lin. yds.}$$

49.9 is the reed width.

C. *Gray fabric weight*:

(1) The weight of the warp, plus the weight of the filling is equal to the weight of the fabric in the loom. Therefore, 28.13+28.83=56.96 pounds per 100 linear yards of gray fabric.

(2)
$$\frac{1 \times 100}{56.96} = 1.75 \text{ linear yards per pound}$$

MAN-MADE FIBER FABRIC

Square Sample Method—Finished fabric data: width 45.80 inches; construction, 152 ends×64 picks.

Considering that a man-made fiber fabric is under question, the yarn numbering system employed is the denier system. Under this system, the yarn number expresses the number of weight units in a unit length. One denier has one gram in 900 meters. One pound of yarn has 4,464,528 yards. Example: a ten-denier yarn has $\frac{4,464,528}{10}$ yards per pound or 446,452.8 yards. The remainder of calculations (contraction, length of pick) will be:

A. *Weight of Finished Fabric*—Twenty-five squares of fabric were cut from the fabric (five inches by five inches), and the weight was 1.790 grams. Therefore,

$$45.80'' \times \frac{36 \times 100}{453.6} \times \frac{1.790}{25} = 26.03 \text{ lbs. per 100 lin. yds.}$$

$$\text{Lin. yds. per lb.} = \frac{1 \times 100}{26.03} = 3.84$$

B. *Warp and Filling Calculations*—

(1) Filling contraction: The filling stretched from 45.80 inches to 46.75 inches. Therefore,

$$\frac{46.75'' - 45.80'' \times 100}{46.75''} = 2.05\%$$

(2) Filling yarn count: The yarn count will be calculated in the denier system. Three picks were unravelled, measured and weighed. The average length of stretched pick was found to be 46.75 inches, or 118.65 centimeters (one inch equals 2.54 cm.). The weight of these picks was found to be 0.0593 grams, or 59.3 mgm. The denier size will equal:

$$\frac{59.3 \text{ mgm.} \times 900}{3 \times 118.65} = 150\text{-denier}$$

(3) Warp-take-up: The warp yarns stretched to 15 inches from 14.01 inches. Therefore,

$$\frac{15'' - 14.01'' \times 100}{15''} = 6.6\% \text{ take-up}$$

(4) Warp yarn count: Ten ends were unravelled, measured and stretched. The stretched length was 15 inches or 38.10 cm. The weight of ten ends was found to be 0.0423 gms. or 42.3 mgm. The denier count is:

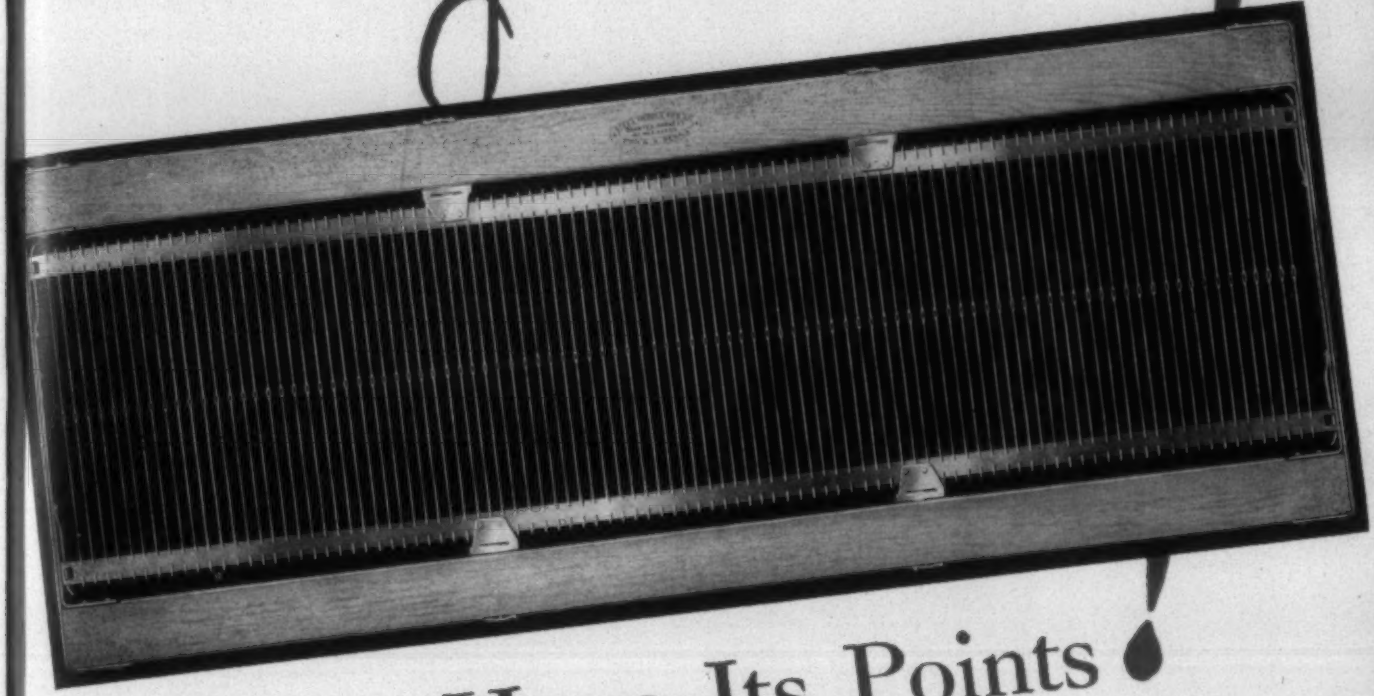
$$\frac{42.3 \times 900}{10 \times 38.10} = 100\text{-denier}$$

(5) Ends per inch in loom:

$$\frac{152 \times (100 - 2.05)}{100} = 149 \text{ ends}$$

(Continued on Page 78)

Being Firm...!



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(6) Picks per inch in loom:

$$\frac{64\times(100-6.6)}{100}=59.77 \text{ picks or } 60 \text{ picks}$$

(7) Warp weight:

$$\frac{149\times46.75\times(100+6.6)}{4{,}464{,}528}=16.63 \text{ lbs. per } 100 \text{ yds.}$$

(8) Filling weight:

$$\frac{60\times46.75\times100}{29{,}760}=9.43 \text{ lbs. per } 100 \text{ lin. yds.}$$

C. *Gray Fabric Weight*:

(1) The weight of the warp plus the filling weight is equal, of course, to the weight of the fabric in the loom. Therefore, 16.63+9.43=26.06 pounds per 100 linear yards.

(2) $\frac{1\times100}{26.06}=3.83$ linear yards per pound

CONSTANTS USED IN FABRIC CALCULATIONS

Cotton

$$\frac{1''\times7{,}000 \text{ grains/lb.}}{36''\times840 \text{ (cotton standard)}\times15.43 \text{ grains/gram}\times1 \text{ gm.}}=.015$$

Cotton count:

$$\frac{''\text{ weighed}\times.015}{\text{Wt. in grams}}$$

Worsted:

$$\frac{1''\times700}{1''\times560 \text{ (worsted count)}\times15.43\times1}=.0225$$

Wool run system:

$$\frac{1''\times700}{36\times1{,}600\times15.43\times1}=.0079$$

Denier system:

$$\frac{\text{Weight in milligrams}\times900}{\text{Length in centimeters}}$$

Fabric analysis should not be concerned with only duplicating a competitive offering. We must constantly keep in mind that the end-use requirements for which a fabric is engineered are dependent upon the essential qualities of fabric construction. We can only satisfy this desired end by using an engineering approach in the design and manufacture of textile fabrics.

Automatic Pick And Pick Loom Being Readied

The first pick and pick automatic loom ever produced for this country will soon be made available by Crompton & Knowles Loom Works, Worcester, Mass., it was revealed recently by W. C. Howe of the firm's sales division at a seminar for textile mill operators in Philadelphia, Pa., sponsored by the National Association of Woolen & Worsted Manufacturers.

The new C. & K. loom is called the W-3 Select-a-Pic, Mr. Howe told the seminar's session on weaving. The development promises a stabilization of work loads on a basis of automatic weaving even though certain fabrics of a pick and pick nature are woven, he explaind. This means a fixed level of employment and savings in production, he said.

Mr. Howe was assisted in his explanation by James Hewitt, manager of the C. & K. Philadelphia office, and Clifford Darwin, who is in charge of service at the Worcester plant.

Mr. Howe's disclosure was in keeping with the tenor of the meeting which centered around new mechanical developments to strengthen the economic position of wool and worsted mills. The session was conducted by Richard C. Oberdahn of N.A.W.M. and other participants included A. W. Reynolds of Davis & Furber Machine Co., North Andover, Mass.; Harry Moss of Whitin Machine Works, Whitinsville, Mass., and Elmer Glaeser, American Cyanamid Co., Bound Brook, N. J.

Mr. Oberdahn urged the gathering of superintendents and supervisors to join the attack against the Labor Department's proposal to raise the minimum wage from $1.05 to $1.20 an hour in the woolen and worsted industry.

Mr. Reynolds predicted that the next trend in carding would be the use of 84-inch cards. These require no more operators than the 48-inch cards and their cost per end is less. The mill of tomorrow will use doffer rolls instead of combs on the cards, he continued. He said that there will be more use of synthetic tapes instead of leather and new cards will be completely equipped with anti-friction bearings and variable speed drives. He added that the textile machinery manufacturers will probably sell more cards this year than they believed possible a few months ago.

Worsted knitting and weaving yarn of 12s count and finer will all eventually be spun on American machinery, Mr. Moss told the meeting. He explained that counts coarser than 12s could be spun, such as 3s used in the carpet trade. "I subscribe to the theory of the predominance of American spun yarn," Mr. Moss stated. "Bradford and French systems cannot compete pricewise, and you can get better quality from American machinery."

Spindle speeds were discussed and it was said that American speeds are higher than those on cap spinners used in the Bradford system. Also, workloads and spindle assignments were said to be in excess of those in this area and New England. Research on coarser wools with respect to bypassing combing was another subject. It was said that by carding and processing on Roto Drafters, American machinery could be used to follow through.

Mr. Glaeser explained difficulties arising in various plants under the topic, "Peculiarity of Dyeing Colors on Textiles." Mr. Glaeser, who headed the dyeing and finishing discussion, also pointed out how the dyer tries to rectify conditions brought on by the use of artificial light and daylight. Mr. Glaeser expressed the belief that synthetics will not push wool out of business.

"Wool," he stated, "gives a drape to a suiting fabric. In carpets, it gives warmth and protection against fire. Each fiber has its own particular use to which it can be applied." He further emphasized that dyers should carefully check the blended material upon receipt to avoid trouble. "Much trouble starts in the blending room," he remarked, "but doesn't show up until it gets to the dyer."

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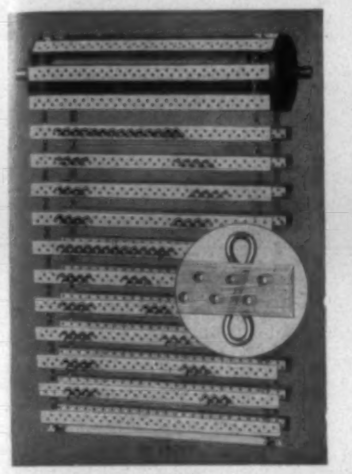

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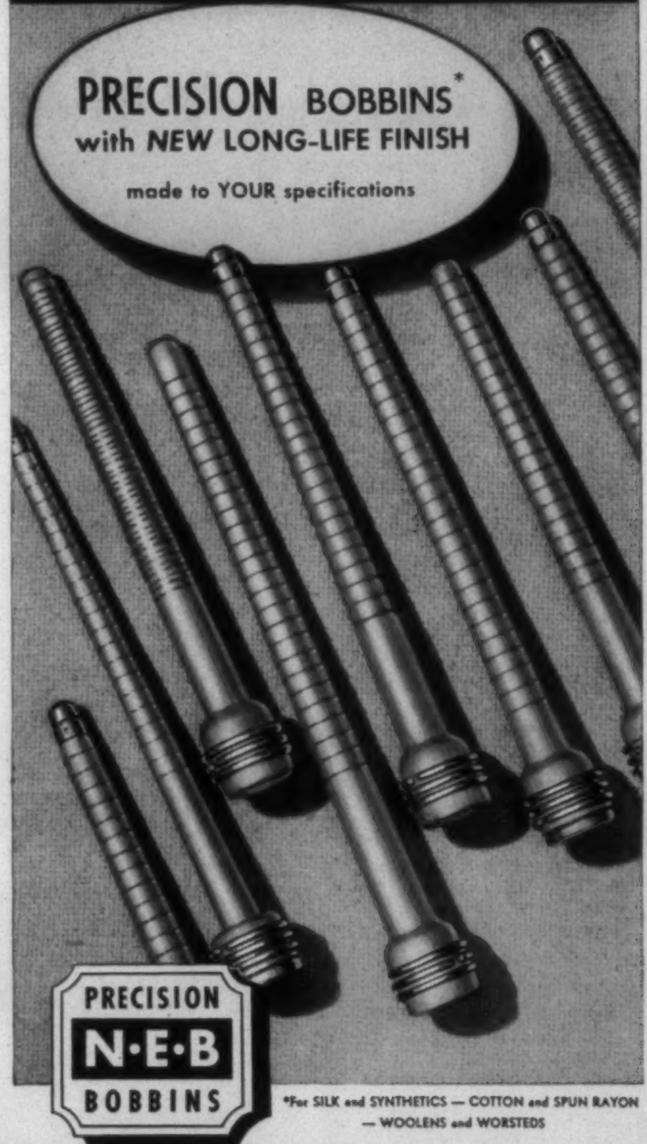

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Notes On Dyeing Tub-Fast Colors

By F. O. STONE—Part Five

Part IV of this series was written to help the non-technically trained dyehouse operative to understand the operations of naphthol dyeing while at the same time to be of value to the textile laymen not connected with the dyeing and finishing department. This article (Part V) continues the efforts initiated in Part IV as to dyeing of naphthol on cotton and viscose rayons.

FAST color salts and fast color bases were discussed in Part IV; fast color salts are diazotized fast color bases properly buffered to stand storage satisfactorily and possess high solubility for use. The buffering (neutralizing) agents are similar chemically to the stabilizing agents used in the diazotizing of fast color bases preparatory to use in regular naphthols coupling operation. In such an operation, the buffering or stabilizing agents used are sodium acetate, sodium formate, alum (aluminum sulfate), etc.

The amounts used on diazotizing of fast color bases is kept to a minimum whereas a naphthol maker must stabilize and buffer his diazotized base solution for an indefinite storage period in addition to drying requirements. This requires the maker to use other stabilizing agents plus the usual buffering compounds used regularly in preparing the fast color bases.

Various products such as dehydrated Glaubers salt are used as the filler in the manufacture of fast color salts and then the compounded mix is dried under vacuum so as to prevent a "break down" of the sensitive-to-heat diazotized color base.

Naphthol makers have made great progress in the manufacture of soluble and stable fast color salts though many dyeing plant officials prefer to prepare and diazotize their own fast color bases instead of using color salts due to economies effected and desirable properties of this method. This preference is due to the fact that certain fast color salts such as Red 2G, Fast Red 3GL, Garnet GBC, Red KB, Red GL and Red B do not always give the best color fastness to crocking as compared to properly diazotized fast color bases.

The plant chemist and dyer will contend that the extra stabilizing buffering compounds used in fast color salts tend to make the fast color salt solution "lay" on the outside of cotton and spun viscose rayon fibers creating a sticky condition of the yarn and during the coupling operation, this condition increases thus causing increased crocking. Whereas on the coupling of naphtholated cotton or spun viscose rayon with properly diazotized fast color bases solution carefully stabilized with sodium acetate or formate, then the necessary amount of acetic acid, the dyed naphthol yarns or staple fibers are freer from sticky condition and crock fastness is improved.

Those fast color salts showing greatly improved solubility and freedom from this tendency to make sticky yarns and staple fiber are Fast Scarlet F, Scarlet 2G, Ponceau L, Bordeaux GP and Red PDC. One piece goods the use of fast color salts shows a much wider range of satisfactory results and less tendency to crock heavily as observed on staple fiber and yarns. The following range of fast color salts plus those listed for use on yarns have shown greatly improved results as to crocking, etc: Fast Red B, Red 3GL, Red GL, Blue B, Blue BB, Bordeaux GP and many others not so widely used.

Preparation and Diazotizing Fast Color Bases

It is most desirable to have your naphthol supplier furnish your plant chemist and dyer a full formulation and procedure for the preparation, diazotizing and neutralizing (stabilizing) of fast color bases used.

These procedures can be prepared both on percentage basis for small scale laboratory work as well as combined percentage and volumetric basis for plant runs on yarns and piece goods. Naturally the formulations and procedure are essentially technically similar for yarns, staple fiber and piece goods but vary in operating and mechanical handling steps. With this in mind, naphthol makers and suppliers can help all concerned in giving "step" procedures with all formulae sent plant dyers.

A dyer should not be timid about requesting this technical assistance as sometimes it is of much or more practical value to a plant dyer or second hand than to have one or more demonstrations in a plant, and it usually is a test of where the supplier is giving a worthwhile procedure from a practical basis or just one out of a color manual.

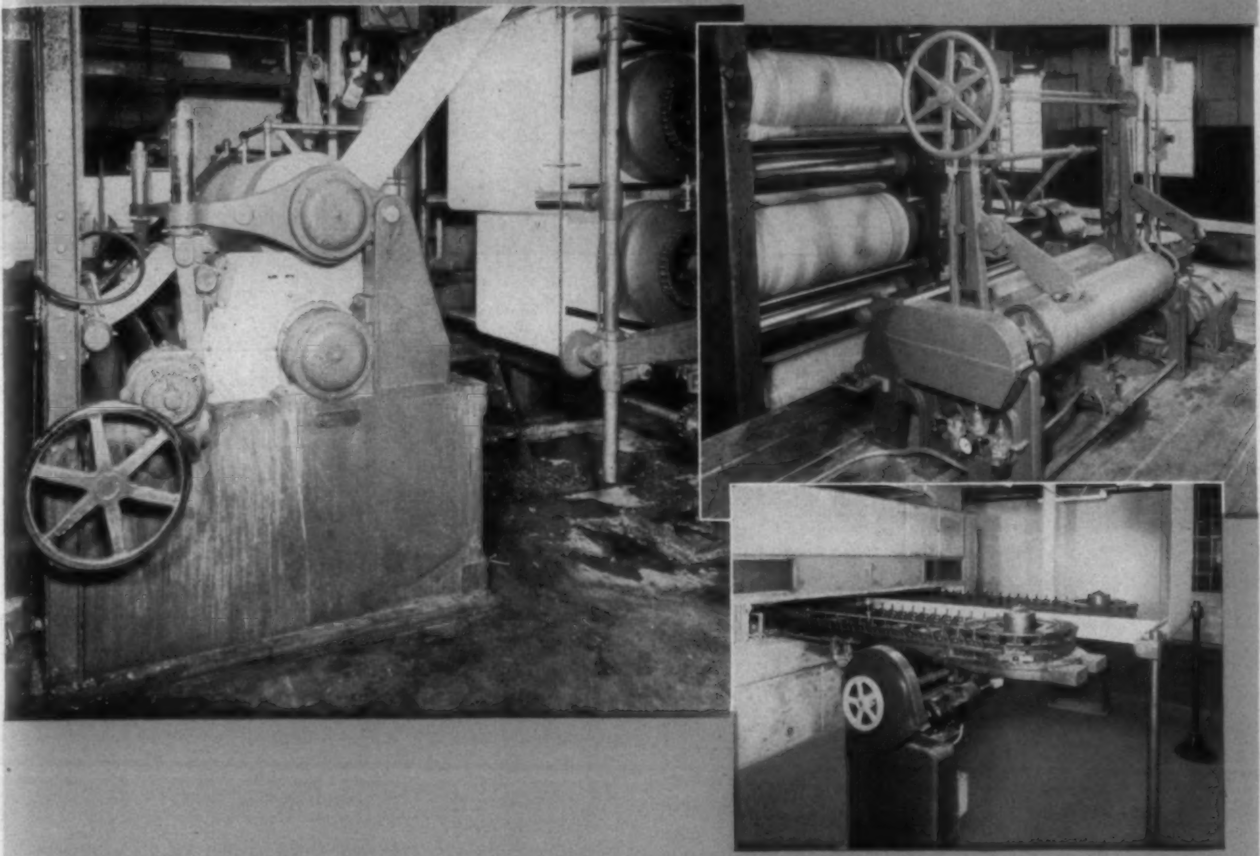
Below is an outline of such a procedure that should prove helpful to a plant running package or staple fiber and piece goods dyeing and find it desirable to diazotize the fast color bases.

Standard Method—Use wooden barrel in preference to metal barrel unless stainless steel container available.

(1) *Pasting up Fast Color Base*—Per cent dispersing agent (this product must be resistent to mineral acids—H.C.L.). Notation as to whether hot or cold water to be used.

(2) *Addition of Muriatic Acid (H.C.L.)*—Speed of

Four Machines . . . One Production Plan



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addition of acid to obtain fully dissolved base. Precaution as to time required to dissolve base and whether this acid base solution should be allowed to remain hot for definite period before addition of cold water and ice. Too rapid cooling may cause some acid color base solution to become "tarry."

(3) *Cooling of Acid Base Solution*—Cooling of acid base solution to *desired temperature* of 40° F. and volume of *water desired, must be carried out slowly.*

(4) *Introduction of Dissolved Nitrite of Soda*—Add nitrite solution with desired amount of stirring—not excessive—then allowing fast color base solution to diazotize protected from direct or indirect sunlight with occassional stirring for given period at 40° F. Check bath with potassium iodine starch paper to determine if diazotizing bath is satisfactory, if not, make recommendations for correction. A correct bath with proper amount of muriatic acid and nitrite should show blue on starch test paper, if no blue color have necessary amount of nitrite or acid added promptly.

(5) *Neutralization*—The diazotized base solution should not be neutralized with sodium acetate or other agent required until machine operator is ready for coupling operation. A neutralized diazotized base solution tends to start breaking down after 30 to 60 minutes and will show noticeable loss of color yield if allowed to stand in neutralized condition.

On neutralizing add dissolved diluted sodium acetate solution slowly with stirring, test solution with Congo Red test paper as soon as test paper shows no color change, then that should be sufficient amount of sodium acetate to use. It is desirable to keep sodium acetate to minimum requirements as an excess in neutralized color base solution sets up liberation of acetic acid and this plus the acetic acid used in the coupling operation may prove an excessive amount. Acetic acid is diluted and added directly to coupling bath.

The pH of various prepared and neutralized fast color bases in coupling bath showed a range of four to five pH, a pH of 3.5 is usually too low and causes weak shades due to retarded coupling action while a high pH of 5.5 to six may start a break down of fast color base both causing off shade as well as poor fastness on dyed shade.

pH Control in Coupling Operation

Careful control of pH in the coupling operation is an essential, and keeping piece goods to a minimum of moisture content is of value as that prevents too rapid dilution of coupling bath as the prepared diazotized color base or fast color salt solutions are added. This helps maintain a more uniform pH in the coupling bath.

Another important factor is that the temperature of the coupling bath should be maintained between 50° to 70° F. to obtain a normal uniform color coupling yield and shade.

There are certain plants that may wish to obtain, for example, a light blue using Naphtholated AS goods and coupled with Fast Blue BB. The operative in this instance would run a low pH of three to 3.50 thus obtaining a bright light blue whereas if run at four to 4.5 pH they would get greater color yield and heavier shade. Reds can be varied from bluish to yellowish (scarlet) tone by pH of coupling bath.

This type of control through use of low or high pH in coupling does not give the most uniform results when trying to duplicate same on production. For this reason most yarn and piece goods plants prefer running their coupling operation on a standard four to five pH to obtain highest uniform color yield and then in their finishing off operation obtain desired effect on final shade desired.

Other essentials that go hand-in-hand with careful coupling operation are having temperatures of 60° to 75° F. on both piece goods, yarns and staple fibers. For piece goods it is highly desirable to have the naphtholated goods dried and "skyed" (cooled) as they enter the coupling bath as that helps eliminate the dilution of bath variable. This method gives the most uniform shade production on naphthol dyed piece goods.

On pad-jig and many continuous operations the piece goods can only be squeezed on mangle or given a vacuum extraction which is second best to drying naphtholated goods before coupling. On yarns and staple fiber, the cold salt rinse has become the accepted standard for preparing the naphtholated yarn or staple fiber ready for coupling operation.

The best safeguard for uniform dye lots is to provide a uniform pH of four to five, bath temperature of 70° to 80° F. and sufficient common salt in bath to prevent rinsing off of naphtholated yarn before coupling operation has gotten underway.

W. R. Howell Heads Finishers Association

Walter R. Howell was elected president of the National Association of Finishers of Textile Fabrics at its 40th annual meeting recently at the Waldorf-Astoria Hotel, New York City. Mr. Howell is executive vice-president of Bradford Dyeing Association (U.S.A.), Bradford, R. I. He succeeded Sydney M. Cone Jr. of Cone Finishing Co., Greensboro, N. C., who had completed a two-year tenure as president.

The retiring president, Mr. Cone, in his annual report voiced optimism about the industry's 1954 volume but stated that prices are bound to be very competitive. He also noted that washable fabrics are in greater demand today than ever before and fabrics which reduce the home launderer's problems and labor will meet increasing favor.

Arthur G. Poor, Standard Bleachery & Printing Co., retiring chairman of the executive committee, was presented by Mr. Cone with an engraved silver tray in recognition of his service to the association and the industry. He served two years as president and two years as chairman of the board.

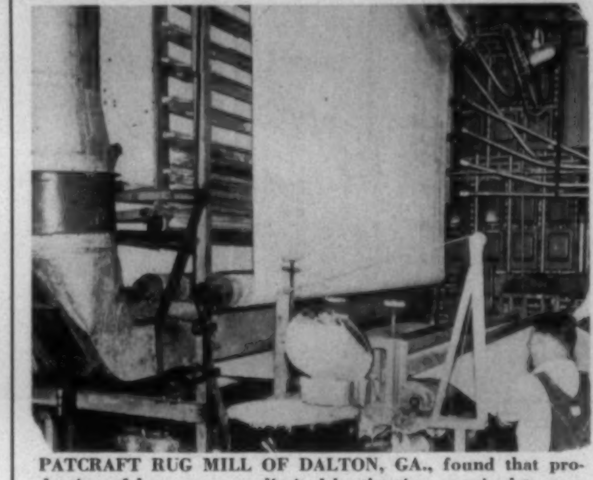
The newly-elected president, Mr. Howell, in accepting the office, stated: "I am honored and very proud to be elected president of our association and I accept with pleasure. I personally consider the finishing industry, that our association represents, the most important in the whole textile field, but I am sure that its importance is not sufficiently stressed and I think something should be done about it. There is a definite art to finishing and the remarkable progress that has been made in the last decade speaks for itself. We all know that fabrics, no matter how good, without a finish are of little value."

Reviewing the association's work in the past year, Mr. Cone noted especially its efforts on the Flammable Fabrics Act problem, waste disposal legislation, color classification, water repellent trade practice rules, and a survey of textile printing machines.

Elections were held during the morning session and in addition to Mr. Howell's election as president, the following officers and members of the executive commitee were elected: chairman of executive committee, Sydney M. Cone Jr., Cone Finishing Co., Greensboro, N. C.; vice-president, J. Marshall Cole, Cold Spring Bleachery, Yardley, Pa.; vice-president, George Sinkinson, Sayles Finishing Plants, Saylesville, R. I.

The following members were elected to the executive committee: Robert Amory, Springs Mills (Grace Bleachery), Lancaster, S. C.; Robert Bendheim, Rock Hill (S. C.) Printing and Finishing Co.; E. R. Farrell, Mansfield (Mass.) Bleachery; W. O. Forssell, Slatersville (R. I.) Finishing Co.; James Harrell, J. P. Stevens Co. (Delta Finishing Co. Division), Philadelphia, Pa.; C. Scott Lewis, Fairforest Co. (Finishing Division), Spartanburg, S. C.; Lawrence Marx Jr., Clearwater (S. C.) Finishing Co.; Royce N. Pharr, United States Finishing Co., Norwich, Conn.; William Reid, Riegel Textile Corp., Ware Shoals, S. C.; Chas. N. Robertson III, Robertson Bleachery & Dye Works, New Milford, Conn.; Julian Robertson, North Carolina Finishing Co., Salisbury, N. C.; G. S. Rockefeller, Cranston (R. I.) Print Works; John Ward, Bellman Brook Bleachery, Fairview, N. J.; C. B. Hayes, Pacific Mills (Lyman Division), Lyman, S. C.; A. L. Garfinkel, Lowell Bleachery Inc., St. Louis, Mo.

In addition to the above, the following members of the executive committee continue to serve unexpired terms as follows: Arthur G. Poor, Standard Bleachery & Printing Co., Carlton Hill, N. J.; W. R. MacIntyre, Jos. Bancroft & Sons Co., Wilmington, Del.; G. D. Harrison, Pepperell Mfg. Co. (Lewiston Division), Lewiston, Me.



PATCRAFT RUG MILL OF DALTON, GA., found that production of loop rugs was limited by the time required to cure and dry the liquid latex backing. The latex is used to anchor the ends of the yarn and to provide anti-skid properties in the finished product.

To speed up the process, Patcraft installed a double-pass far-infrared oven, using Chromalox electric radiant heaters furnished by Edwin L. Wiegand Co. As a space-saving measure, the heaters are set up in two vertical banks to provide intense, uniform heat to the coated side of the web as it travels up and down through the oven. Closely-spaced heaters bring the work quickly up to the drying temperature, while others spaced farther apart accurately hold drying temperatures through the remainder of the oven.

The heaters are mounted on frames attached to rollers so that the assembly can be withdrawn from the work during starting and stopping periods. A blower provides circulation through the oven, exhausting the moisture-laden air. Latex is now dried evenly and thoroughly at speeds from eight to 20 feet per minute, depending on material thickness. As a result, rugs can be cut immediately and set on to be dyed and finished.

Careful Selection Of Surfactants Stressed

H. C. Borghetty of the textile chemicals department of Rohm & Haas Co., Philadelphia, Pa., was the principal speaker before a recent meeting of the Southeastern Section, American Association of Textile Chemists & Colorists, at Talladega, Ala. Mr. Borghetty's subject was "Surfactants in the Textile Industry."

Discussing the requirements of surface active agents for the majority of textile operations, Mr. Borghetty placed particular emphasis on their adaptability for specific uses. The practical aspects of preparation, dyeing and finishing of fibers and fabrics were outlined and attention called to the improvements that can be obtained by careful selection of the correct surfactant.

The use of dispersing agents of a non-fatty nature was noted to be in greater demand because of pigment dyeing. Mr. Borghetty noted the recent interest for mass dyeing of viscose and acetate fibers prior to spinning which calls for the use of dispersing agents of low chemical reactivity and high stability. He said dispersing agents can be used with colloidal agents and still lead to the development of improved detergents at present utilized in the household field, although not yet for extentive use in the textile industry.

"A parallel, however, exists in our industry when one considers the precipitated soap which is formed in hard water and then dispersed by the further addition of soap in order to obtain suds. The lime and magnesium soaps formed are actually dispersing agents emulsified and carried by the soap to contribute to the scouring effect. The textile industry utilizes soaps in conjunction with synthetic detergents in order to achieve this condition during the rinsing cycle where the introduction of further hard water would precipitate even the excess soap.

"This point is the basis for the use of synthetic detergents in conjunction with soap for many textile uses and demonstrates the supplementary characteristics of soaps and syndets. The utilization of polyphosphate to protect the soap as a third component during the scouring cycle further enhances the detergent effect and assures good rinsibility," he pointed out.

Specific selection of surfactants for dyeing operations was noted by Mr. Borghetty. "The selection of surfactants in dyeing operations is always governed by the chemical constitution of the product, the chemical nature of the dyestuff and the constitution of the fiber to be dyed. For wool dyeing, generally speaking, sulfonated wetting agents are the most appropriate for level dyeing of wool because the sulfonic group can combine with the amino groups of the wool and thus compete for position with the sufonated dyestuffs"

Robbins Mills Inc. of New York has been granted Patent No. 2,612,770 upon application of Victor T. Fahringer of Clarksville, Va., for an improved boil-off apparatus for textile fabrics wherein means are provided for distending the preformed spaced loops of a fabric as it is progressed through the boil-off bath, thus insuring that the entire surface is exposed to the boil-off liquid.

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Fig. 304

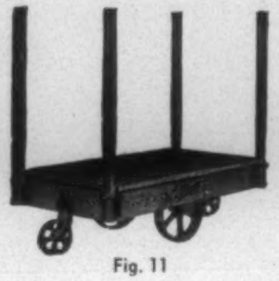
Fig. 11

Fig. 64-15

DESIGN AND
APPLICATION
ENGINEERING

Fig. 53

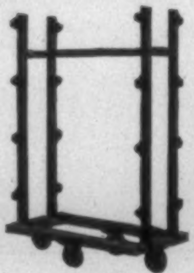
Fig. 310

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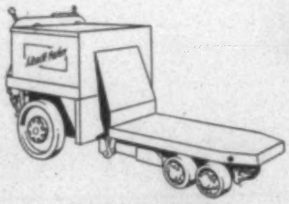
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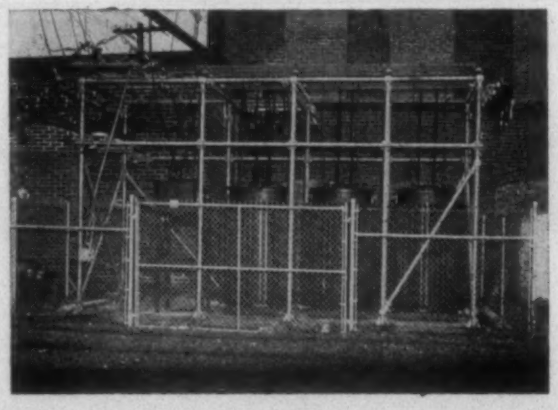

Photo showing Sub-Station structure furnished and installed by Southern Electric Service Company, Inc., Charlotte, North Carolina. This was designed for 2400 volts primary to 600 volts secondary for conversion to 4160 volts, 3 phase, Wye connection primary to 600 volts secondary.

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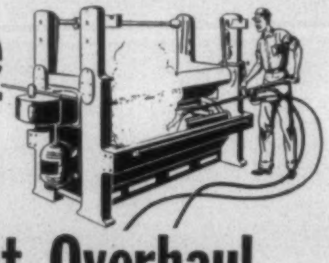

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Corrosion Control And Prevention

By L. R. HONNAKER, Supervisor of Engineering Consultants, Du Pont Co.

Mr. Honnaker's remarks were delivered Jan. 26 during the Plant Maintenance & Engineering Conference, held concurrently at Chicago with the Plant Maintenance & Engineering Show. Both the show and conference were productions of Clapp & Poliak Inc.

IT is generally agreed that the direct cost of corrosion to American industry is several billion dollars annually. An even greater sum of money may be involved in the hidden cost of corrosion if it is considered that in many instances the value of lost production time incidental with equipment repairs or replacements is greater than the maintenance costs. Today, manufacturing steps are highly integrated and techniques have largely changed from batch to continuous type operations. This means that practically none of the equipment can be out of service for repairs or replacement without seriously curtailing production. It is very important in these days of expensive materials and high construction costs that minimum facilities be installed to meet operating requirements. These conditions require careful consideration of corrosion and selection of materials of construction. Obviously then, corrosion control and prevention warrants serious attention by management and all others responsible for the building and maintenance of the plants.

Thirty years ago, a relatively short time, little was known about the control and prevention of corrosion. The electrochemical theory of corrosion was just beginning to gain wide acceptance. Information and experience regarding the use of inhibitors was quite limited. Means for cathodic protection were yet to be developed. Protective coatings were of poor quality and the importance of proper application techniques were not well recognized. Plastics were not available and the stainless alloys and rubber linings were just becoming available for commercial use. Fortunately in those days, the corrosive conditions to be met were relatively mild compared to today's operations.

Since that time definite and great strides have been made in increasing our knowledge and understanding of corrosion and developing new materials to withstand severely corrosive conditions. A great amount of information is now available and it is no longer necessary to stand back and assume that high maintenance costs and frequent failures are a necessary evil. This of course, does not mean that corrosion can now be eliminated, but it can be minimized by study and application of available information on the subject of corrosion.

Let's review for a few minutes the matter of information concerning corrosion of metals. There are at least 15 forms of corrosion of metals, almost all of them being electrochemical in nature. Their characteristics are well known, they are generally recognized and information regarding corrective measures or resistant materials is available in technical literature and from other sources. These forms of corrosion of metals are:

General Corrosion—when thinning or loss of metal is not accompanied by any definite manifestation of pitting, cracking, erosion, etc. Inhibitors can frequently be employed to minimize general corrosion and where necessary, more corrosion resistant metals or other materials of construction can be used.

Pitting—where electrochemical action results in loss of metal at anodic areas. General corrosion is frequently slight even in instances where perforation of the metal occurs as a result of pitting type corrosion. Notable in this category is the pitting of stainless steel and aluminum in environments containing chlorides. The use of inhibitors is effective in minimizing pitting in many environments. Design considerations are important in many instances.

Stress Corrosion Cracking—where cracking occurs as the result of the combined effects of static stresses and corrosion, and generally without noticeable loss of metal. Typical examples of this form of corrosion are the season cracking of cold formed on worked brass in atmospheres containing ammonia and the cracking of the austenitic stainless alloys in presence of chlorides.

Caustic Embrittlement—similar to stress corrosion cracking, except that it is limited to conditions where caustic is involved. The difficulties encountered in operating boilers a number of years ago are well known. The most common occurrence now is the failure by cracking of carbon steel when it is used in the as-welded condition for handling caustic solutions above room temperature.

Galvanic Corrosion—where the more noble of two metals in contact in an electrolyte causes electrochemical attack of the less noble metal. Perhaps the best example of this form is the use of zinc to protect steel and aluminum equipment. Galvanic protection of the equipment is obtained as the result of the sacrificial corrosion of the zinc.

Hydrogen Embrittlement and Attack—where hydrogen generated by contact with process solutions enters metals and causes loss of ductility, microcracking and blistering. Aqueous hydrogen sulfide frequently causes failure of steel equipment as the result of such effects.

Crevice Corrosion—where localized attack occurs on surfaces partially shielded from contact with corroding medium. This also includes concentration cell and differential aeration effects.

Intergranular Corrosion—where attack is concentrated at grain boundaries without appreciable general corrosion. This was a common occurrence in stainless steel equipment ten to 15 years ago before the effects of carbide precipitation were understood. Failures are relatively infrequent today and further improvement in this respect will come as the result of using the stabilized or the low carbon grades of the austenitic stainless alloys.

Dezincification—where the zinc constituent in brasses is selectively removed leaving sponge copper behind in essentially the original shape and volume of the unattacked piece. This effect is generally limited to brass compositions containing more than 15 per cent zinc. The additions of small amounts of arsenic, anitmony and tellurium to the metal will generally minimize, if not prevent, this form of corrosion in brass.

Graphitization—where galvanic corrosion occurs between graphic and iron constituents in cast iron with resultant formation of spongy mass of corrosion products. The original shape and volume are generally retained. The low alloy cast iron materials are relatively immune to this form of corrosion.

Erosion-Corrosion—where the effects of velocity remove protective films and cause increased rate of corrosion. This is most likely to occur in liquid systems which contain solids.

Impingement—similar to erosion-corrosion except solids are generally not involved and specific effects are more localized. Perhaps the most common occurrence of this form of corrosion is in nonferrous alloy condenser tubes near the inlet ends. A reduction in velocity or turbulence will minimize this difficulty.

Fretting Corrosion—where corrosion is accelerated by mechanical removal of films or corrosion products. This form of corrosion is generally confined to machine parts with small relative motions and high unit loads.

Oxidation—where, generally at elevated temperatures, metal oxides are formed by direct chemical reaction and losses occur as scaling.

Sulfidation—where, at elevated temperatures, sulfur bearing atmospheres cause intergranular attack. This is limited for the most part to alloys of high nickel content.

It is evident from this brief description of the better known forms of corrosive attack on metals that they overlap and may not always be well defined. In some instances several forms of corrosion may occur simultaneously. The field of the study of corrosion of metals is a large one and may be complicated by many ramifications.

It would be amiss, even in this brief discussion of corrosion control and prevention, not to mention the non-metallic materials available today for use in combatting corrosion. There are almost as many different non-metallic materials as there are metals and alloys and their use has provided economical solutions to many difficult corrosion problems.

Metallic contamination has become a very important consideration, and in some instances a limitation, in the use of metals for equipment for processing or handling synthetic textile fibers, and a host of other products where quality is lowered by such contamination. The use of non-metallic materials, and in particular the plastics and elastomers, has proven to be very attractive for avoiding metallic contamination as well as corrosion. The use of the latter materials is limited to relatively low pressures and service temperatures, say 150-250° F., depending upon material, and chemical exposure involved, but they are gaining wide acceptance and use in spite of such temperature limitations.

Use of Plastics and Rubber

There are several types of plastic materials that have been accepted as economical improvements over metals for a number of corrosive conditions. Notable among these are polyethylene, polyester-fiberglas, styrene-synthetic rubber blends and unplasticized polyvinyl chloride, all of which are available as piping, sheet stock and miscellaneous fabricated equipment items. These materials, particularly the latter two, are now being used extensively for ventilating ductwork for handling corrosive fumes and they have proven to be economical replacements for such materials as stainless steel, rubber-lined steel and aluminum. A point of merit, which should not be overlooked in considering the over-all cost of plastic equipment, is that they do not require painting for external protection against corrosion. Plastics are replacing metals in many applications because of their better resistance to chemicals, service life and economy.

Excellent progress has been made in developing rubber lining compounds, both natural and synthetic, for corrosive service applications and these have proven to be of real value in the field of corrosion engineering. These materials have become almost standard for handling aqueous hydrochloric acid solutions. They are useful and economical for handling dilute sulfuric acid solutions and many other chemical solutions that are corrosive to metals. Rubber linings are particularly attractive for use where abrasive as well as corrosive conditions are involved. The cost of rubber-lined steel equipment is generally competitive or lower in cost than corrosion resistant alloy construction and it will provide good service life when properly engineered.

At the present time the upper temperature limitation for rubber lining is 160 to 200° F., depending upon rubber compound and chemicals involved. Rubber linings are frequently used in combination with brick linings where processing temperature conditions are above the limit for rubber and they have proven to be good membrane linings for use in combination with brick-lined steel constructions. A number of compounds are available which may be easily applied in equipment in plants and almost all of the compounds may be readily and adequately repaired in the plant.

One of the developments that has done much to improve the serviceability of rubber linings is the spark test to detect pinholes in the linings and joints or seams. The value of the spark tests for rubber-lined equipment is now recognized by most of the fabricators and it can and should be made a condition of order and acceptance of new equipment.

Maintenance Painting

The subject of maintenance painting and the use of protective coatings for combatting corrosion is of interest to almost all industrial plants and particularly to those having to combat acid fume conditions. A great deal of time, effort and money has been expended in the study of protective coatings and it is now generally agreed that a good protective coating job is dependent upon three main fundamentals; namely, proper surface preparation, proper coating selection and proper application. A compromise in any one of the three will seriously jeopardize chances of obtaining a good protective coating job.

Most of the studies on surface preparation have indicated that sandblasting is the best method. It is always wise to remove mill scale from new steel. Recontamination after cleaning and before coating should be avoided. The best answer to the latter point appears to be to paint as soon after cleaning as is practical.

Coating selection should be based on type and severity of exposure. It is obvious, for instance, that an outdoor service requires a coating that is resistant to weathering, an underwater service requires a coating resistant to water, and a chemical exposure service requires a coating resistant to the chemicals involved. This should not present any serious problem of selection in most instances—there are hundreds of coating systems available comprising about 14 types, some one of which is able to resist any given set of corrosive conditions. The real problem is that coatings have serious physical limitations such as porosity, low strength, and brittleness.

The last of three fundamentals mentioned above, namely application, is generally considered to be the most important.

The surface preparation can be excellent and the coating film adequately resistant to conditions, but if it is not applied properly, premature failure will occur. The main problem in application is to obtain freedom from pinholes and holidays in the coating. It is generally agreed that the best way to assure good coverage over surface roughness, sharp edges, and corners is to apply multiple coats or passes to a dry film thickness of at least three times the profile depth of the surface roughness. Observances of the requirements for adequate coverage or film thickness will probably do more to assure a good coating life than any other single factor. Minimum desired dry film thickness in almost all cases is five to six mils. Much of the success of the fibrated mastic type of coating which has proven to be quite good for severe industrial atmosphere exposure is undoubtedly due to good coverage over rough areas, corners and the relative absence of porosity. These coatings are sprayed on to about one-eighth inch thickness and are tested with spark tester to detect pinholes and holidays.

While on the subject of protective coatings, it should be mentioned that it is unwise and generally uneconomical to try to use steel equipment coated with chemically resistant coatings for handling chemicals that are quite corrosive to steel. This results from the fact that it is impractical to avoid some pinholes or holidays in the coatings and rapid attack of the steel will occur at such points. The highly resistant coatings such as the baked phenolic resins and the various vinyl resins are ideal for minimizing contamination of chemicals handled in steel equipment but they should not be used where 100 per cent protection is required.

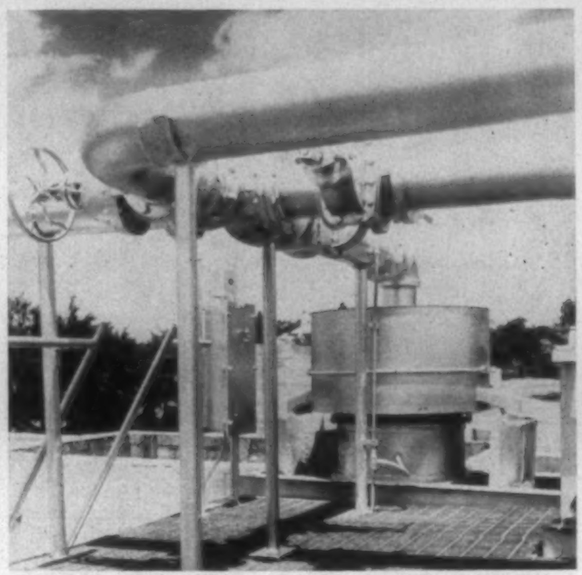
It is impossible to adequately cover a subject as broad as corrosion control and prevention in a brief discussion such as this one. It must be evident, however, that there are many possibilities for effecting improvements with respects to corrosion control and prevention, and that considerable attention to the subject is warranted.

Trained Personnel Necessary

It is believed the best possible approach, if not the answer, to industrial corrosion problems is to assign personnel to corrosion engineering work. They should acquire a good background in the knowledge of corrosion. This includes a knowledge of the corrosive characteristics of chemicals as well as the corrosion resisting characteristics of materials. They should become familiar with the physical and mechanical properties of materials of construction, the physical properties and characteristics of the chemical materials to be handled, information on availability and cost of materials of construction and fabrication techniques and limitations.

They will have to work with personnel in development, design, maintenance, purchasing, accounting and other groups, frequently under trying conditions and they should, therefore, have an ability to get along with other people. Common sense and good judgment are a must in this work; an economical and sound answer is seldom a matter of simple reference to chemical resistance formation.

A corrosion engineer's work should involve more than acquiring a background of information and simply selecting materials of construction for design and maintenance work. He should investigate cases of failure on high maintenance items and arrive at a decision to effect an improvement. This may involve an experimental program or changes in design or fabrication procedure and not necessarily materials of construction. He should set up specifications covering materials, procedures, heat treatment, etc., for new or repaired equipment. He should make inspections of new equipment to see that specifications have been met and existing equipment to see that corrosion difficulties are not developing. He should help establish improved maintenance methods and preventive maintenance programs. Records should be maintained for future reference and standards should be set up for spare parts and materials.



WOOLEN MILL SOLVES WASTE SCREEN PROBLEM—Operating on a full 24-hour schedule, two vibrating screen separators screen a total of 800 gallons per minute of wool waste water from the Lebanon (Tenn.) Woolen Mills, thus satisfying municipal requirements. The 80 mesh screen cloths (with wire openings of .007 thousandths of an inch) were furnished by the Sweco Separator Division of Southwestern Engineering Co.

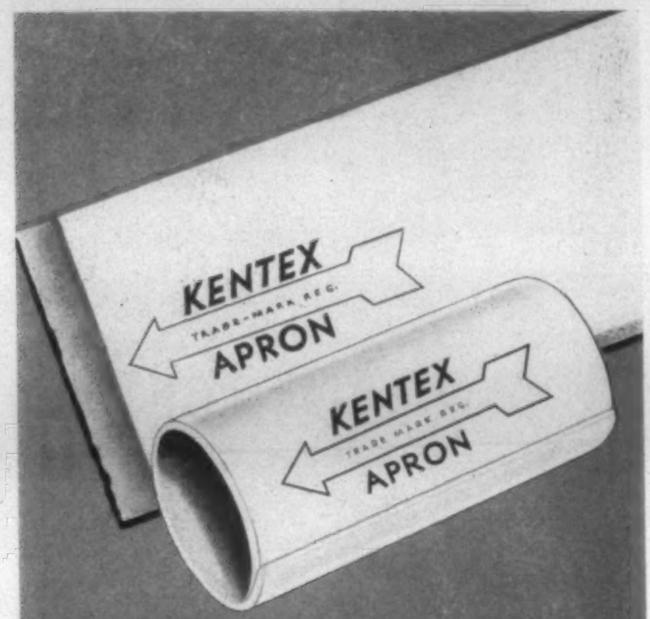
Today the science and technology of corrosion control and prevention has reached the point where impressive reductions in cost and annual losses can be guaranteed by study and application of known corrosion engineering principles and information. Improvements in product quality and operating conditions with respect to housekeeping and safety hazards can also be obtained through corrosion engineering work.

Textile Fraternity Forms Atlanta Chapter

Delta Kappa Phi, the oldest textile fraternity in the United States, has formed an alumni chapter in Atlanta, Ga. Charter night was Dec. 18 and the charter members are: Samuel H. Willis, George O. Lindsey, Gerald B. Fletcher, W. D. Cawley, C. Raiford King, Ernest N. Young Jr., William Postman.

The fraternity's national convention is slated April 2-3 at Raleigh, N. C., with the Kappa Chapter of the School of Textiles at North Carolina State College acting as host. The fraternity has five active chapters and 1,500 alumni members with the majority of them employed in the textile industry.

It was inevitable that the Russians should claim they invented television. One set owner we know, however, thinks it is encouraging that they should take the blame for something.—*Mattoon* (Ill.) *Journal-Gazette*.



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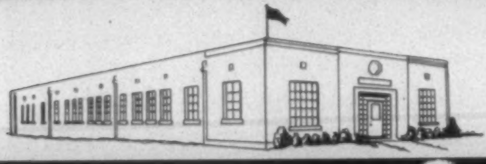

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SUN RAY CONDITIONER is simple to use. It is completely harmless to the machine, to your personnel and the work in progress.

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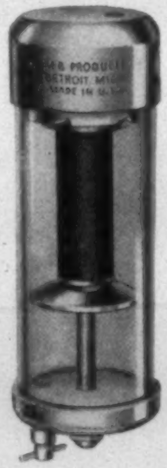

Amazing performance is accomplished by using angular air inlets which develop a centrifugal action, abstracting the moisture and throwing it against the wall of the bowl, from where it runs to below the baffle plate, definitely capturing it to be drained. RIBBON TYPE FILTERING UNIT removes solids 10 microns (.00039") and larger. Bowl is transparent plastic, thus all foreign matter filtered from the air line is visible, eliminating guesswork as to when filtering element should be cleaned or bowl drained. No water, dirt or oil in compressed air that has passed through the filter. . . . This piece of equipment gives maximum protection to Scott and Williams Lint Blowers, Blow-off Hoses and various air-operated controls.

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PERSONAL NEWS

J. D. McPherson

J. D. McPherson, formerly technical director and assistant manager, has been named manager of the manufacturers chemical department of American Cyanamid Co. Mr. McPherson has been associated with American Cyanamid Co. since 1945. A graduate of Alabama Polytechnic Institute in 1935 with a B.S. degree, Mr. McPherson received his M.S. degree from Emory University in 1937. . . . Bancroft W. Henderson has been made director of sales of the organic chemicals division of American Cyanamid Co. Before his advancement Mr. Henderson was manager of the intermediate and rubber chemicals department of the Calco Chemical Division.

Frank E. Cantrell has been appointed superintendent of the Florence Plant of Cone Mills Corp. at Forest City, N. C., succeeding Harold A. Deal, retired, superintendent for the past 14 years. Before his promotion Mr. Cantrell was overseer of the weaving department at the Haynes Plant of the Cliffside Division of Cone Mills at Avondale, N. C.

William A. Griffin

Joe R. Myers

William A. Griffin and Joe R. Myers are recent additions to the sales staff of Ira L. Griffin & Sons, Charlotte, N. C. Mr. Griffin, son of Ira L. Griffin Sr., attended The Citadel one year, was appointed to the United States Military Academy from which he was graduated in 1946. He resigned his commission, as a major, at the conclusion of the Korean armistice and joined his father's firm. To prepare him for his selling career he spent some time in slasher rooms and weave rooms of several textile plants; he also visited Maine to see potato starch made and spent two weeks at the Hubinger Co. corn starch plant at Keokuk, Iowa. . . . Mr. Myers, located in Columbus, Ga., is working directly with the Hubinger Co. in co-operation with the Griffin firm, Southern agent for Hubinger. A native of Indiana, Mr. Myers received his B.S. in chemistry in 1937 from the University of Indiana and also did some work in chemical engineering at Illinois Institute of Technology. He was with Lever Bros. from 1937 to 1942, when he entered the Navy, and on his release from service joined the Pure Oil Co. He joined Hubinger in 1952 and prior to his recent transfer to Columbus worked on the development of OK brand starches and corn syrups in the Mid-West.

Leland Burns has been appointed assistant superintendent of the weaving department and Melvin H. Smith has been appointed assistant superintendent of the carding, spinning and preparations department at the No. 3 Plant of Republic Cotton Mills, Great Falls, S. C., a division of J. P. Stevens & Co. Inc.

E. Hays Reynolds

E. Hays Reynolds has been promoted to assistant manager of the textile sales division of Keever Starch Co., Greenville, S. C. Mr. Reynolds has been associated with Keever in sales and service work in parts of South Carolina and Georgia since his graduation in 1947 from the Clemson College School of Textiles. He will continue to reside in Greenville.

P. W. Beggs has been named superintendent of Goodyear Clearwater Mills, Rockmart, Ga., succeeding the late Earl A. Powell.

Appointment of Maj.-Gen. Kester L. Hastings as Quartermaster General of the Army was confirmed Feb. 5. General Hastings was nominated to head the Army Quartermaster Corps by President Eisenhower on Jan. 25. He succeeds Maj.-Gen. George A. Horkan, who retired as Quartermaster General and from active military service on Jan. 31.

Robert M. Pully has been appointed superintendent and William L. Rankin Jr. has been named assistant superintendent of the Clover, S. C., plant of American Thread Co. Mr. Pully has been superintendent of the firm's Troutman, N. C., plant for the past year and a half and before that was assistant superintendent at Clover. He joined these mills in 1948 as a technical engineer. Mr. Rankin, a graduate of the North Carolina State College School of Textiles, was associated with Springs Cotton Mills before joining American Thread Co. in 1950. Before being transferred to Clover he was with American Thread's plant at Newnan, Ga. . . . Fred T. Broyhill has been appointed superintendent at the Troutman Plant succeeding Mr. Pully. Mr. Broyhill is a textile manufacturing graduate of the North Carolina State College School of Textiles.

Frank P. Brennan and Edward H. Winkleman have been appointed assistant sales managers of U. S. Testing Co., Hoboken, N. J.

Harry Riemer of *Daily News Record* and Dr. W. E. Coughlin, director of consumer services of Celanese Corp. of America, will be guests of honor April 6 at a dinner at the Hotel Astor, New York City, given in recognition of their work in organizing and conducting the first textile lecture series for Columbia University.

John W. Solomon, sales assistant to W. E. Clark, vice-president and general manager of the textile division, United States Rubber Co., will resign on March 1, 1954, to become vice-president of Monarch Rug Mills, Dalton, Ga. Mr. Solomon joined U. S. Rubber in October 1947 as general sales manager and served in that capacity until January 1953 when he was appointed to his present position working out of the rubber company's office in Chattanooga, Tenn. He was primarily responsible for the sale of carded and combed yarns to the knitting and tufting trade. Prior to joining the rubber company, Mr. Solomon was vice-president of Avondale Mills of Alabama. . . . H. E. Anderson, who has been assistant to J. W. Solomon, will continue in charge of the Chattanooga sales office and serve customers in that area.

Samuel B. Roberts has joined the staff of Lockwood Greene Engineers Inc., designing and supervising engineers and architects specializing in the industrial field. A graduate of Stevens Institute of Technology, Mr. Roberts joined the Celanese Corp. of America in 1929, becoming chief engineer of the corporation in 1940.

Alfred T. Loeffler has been appointed vice-president of the chemical divisions of Food Machinery & Chemical Corp. Mr. Loeffler joined the firm in August 1953 as assistant vice-president. He will continue to be located at the firm's New York office at 161 East 42nd St.

Lee C. Shook has become associated with W. D. Dodenhoff Co., Greenville, S. C., as the firm's sales representative in the entire state of South Carolina and part of

North Carolina. He will make his headquarters at the company's home office in Greenville.

S. T. Whittier II

Stephen T. Whittier II has recently joined the sales division of the Pneumafil Corp. in Charlotte, N.C., where his duties will be primarily concerned with sales promotional and analysis for the company and its associate, the Uster Corp. Mr. Whittier served with the United States Army occupation forces in Korea prior to graduating from Williams College and has just completed advanced courses at the North Carolina State College School of Textiles. He is the son of Prof. Benjamin L. Whittier, who was for many years associated with the Mt. Vernon-Woodberry Mills Inc. and is now head of the department of fabric design and development at North Carolina State College School of Textiles.

John J. Kennedy, assistant secretary of Commercial Factors Corp., was honored at a dinner recently in recognition of his having completed 50 years of service with the company. He was presented an automobile.

Donald M. Goerg has joined National Aniline Division, Allied Chemical & Dye Corp., as a technical service representative. Mr. Goerg graduated as a textile engineer from the Textile College of Vienna, Austria, and has had extensive experience in the American textile industry. Recently he was with Klopman Mills Inc. after a previous association with E. I. du Pont de Nemours. In his new position Mr. Goerg will be concerned with mill application techniques in connection with nylon-type fiber produced at Allied Chemical's new synthetic fiber plant now under construction at Hopewell, Va.

C. F. Cline Jr.

C. F. (Chuck) Cline Jr. is a recent addition to the sales staff of the corn processing division of Clinton (Iowa) Foods Inc. Mr. Cline will make his headquarters at Clinton's Greenville, S. C., office, 900 South Carolina National Bank Building.

Reinald Kaufmann and Walter M. Kelly, vice-presidents of Commercial Factors Corp., have been elected directors of the factoring house. Mr. Kaufmann has been with the concern since 1925; Mr. Kelly joined Commercial less than a year ago.

Phillip Nathanson has joined the Lurex division of the Dobeckmun Co., Cleveland, Ohio, to head up a newly-created research and development department. The new unit will make its headquarters at the Dobeckmun Co.'s offices in New York at 250 West 57th Street. For the past 12 years, Mr. Nathanson has been a partner in Iona Mills, New York, a firm which specialized in commission weaving and converting high-style silks. Prior to his Iona Mills affiliation, Mr. Nathanson, a 1923 graduate of the Philadelphia Textile Institute, was for eight years a free-lance textile technician and before that owned and operated two mills in Pennsylvania: Byron Silk Mills in Bethlehem and Manderin Silk Mills in Pennsberg.

F. Eugene Banfield Jr. has retired from his position with Whitin Machine Works, Whitinsville, Mass. Prior to joining Whitin in 1935 Mr. Banfield had extensive experience in the textile machinery manufacturing industry. At Whitin he held at various times the positions of engineering manager, works manager, vice-president, and director.

Harry C. Coley, president and treasurer of Howard Bros. Mfg. Co., card clothing manufacturing firm of Worcester, Mass., has been named chairman of the board. He will continue as treasurer. Mr. Coley has been with Howard Bros. about 54 years, starting as an office boy. . . . Neal A. Mitchell, general manager and secretary, has been elected president succeeding Mr. Coley. Mr. Mitchell, who has been with the company 40 years, currently continues as secretary. . . . Other executive changes follow: Arnold W. Englund has been engaged as general manager; he recently resigned as manager of Lundquist Tool & Mfg. Co., Worcester, and has been an industrial consultant for 22 years. . . . Percy F. Rowley, formerly superintendent, has been advanced to director of purchases and also will supervise personnel and advertising. He succeeds Bertil A. Becker, resigned. . . . Henry H. McWay, formerly assistant superintendent, has been advanced to superintendent. Mr. McWay has been connected with the manufacturing division of the company for 37 years.

Harry C. Coley

Neal A. Mitchell

J. E. Buckheister has been transferred from the Jonesville, S. C., plant of J. P. Stevens & Co. to Piedmont Mfg. Co., another Stevens unit at Piedmont, S. C.

Roy Guest, formerly with Musgrove Mills, Gaffney, S. C., has been promoted and transferred as superintendent to the firm's Broad River Mill at Blacksburg, S. C.

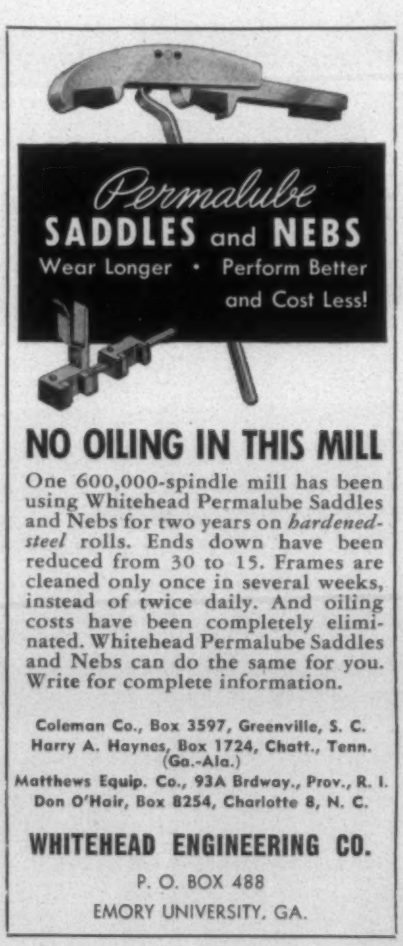
William M. Butler of Winston-Salem, N. C., has been promoted from comptroller to vice-president of Chatham Mfg. Co., Elkin, N. C. . . . John L. Morehead of Charlotte, N. C., president of Leaksville (N. C.) Woolen Mills, a Chatham subsidiary, has been elected to the Chatham board of directors. . . . Haddon Kirk of New York was named sales manager succeeding T. J. Sheehe, who has retired.

J. B. Tollison has been named division manager of the Hartwell, Ga., and Willimaston, S. C., throwing plants of Textron Southern, a division of Textron Inc. Mr. Tollison formerly was plant manager at Hartwell. . . . B. W. McKenzie, formerly superintendent of the Honea Path, S. C., plant, has been transferred to Hartwell succeeding Mr. Tollison. . . . W. E. Simmons has been promoted from general overseer of the weaving room at Honea Parth to succeed Mr. McKenzie as superintendent.

Dan S. LaFar, secretary and vice-president of the LaFar Chain of Mills, with headquarters in Gastonia, N. C., recently was elected 1954 chairman of the Gastonia district of the Piedmont Council, Boy Scouts of America. . . . The Piedmont Council recently honored three textile executives by presenting them Silver Beaver Awards, Scouting's highest award to volunteers for service in Scouting. They are: Hazel H. Howard, superintendent of the preparation department, Cleveland Cloth Mills, Shelby, N. C.; Harold Mercer, general manager of Firestone Textiles, Gastonia; and W. Terrell Webster Jr., vice-president of Warlong Glove Co., Conover, N. C.

S. R. Brookshire, a partner in Engineering Sales Co., Charlotte, N. C., recently was elected president of the Charlotte Executive Club for the 1954 term.

J. F. Matheson, president, G. G. Matheson, executive vice-president, and Ralph Tanner, vice-president and head of the New York sales office of Mooresville (N. C.) Mills, recently resigned from the organization. . . . Julius W. Abernethy of Newton, N. C., formerly board chairman, was elected president; W. W. Rader was elected executive vice-president and treasurer; W. J. Ful-



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Harry A. Haynes, Box 1724, Chatt., Tenn. (Ga.-Ala.)
Matthews Equip. Co., 93A Brdway., Prov., R. I.
Don O'Hair, Box 8254, Charlotte 8, N. C.

WHITEHEAD ENGINEERING CO.
P. O. BOX 488
EMORY UNIVERSITY, GA.

lerton was appointed general merchandise and sales manager; and H. C. Cobb Jr. was permitted to withdraw his resignation and remain as superintendent and vice-president in charge of manufacturing.

C. H. Crews, superintendent of Gerrish Milliken Mills at Pendleton, S. C., since its establishment six years ago, will manage Starr Mills Inc., Anderson, S. C. Installation of machinery at the new synthetics plant is now in progress and initial employment will be about 100.

H. K. Hallett of Charlotte, N. C., vice-president and general manager of Kendall Mills, recently was inducted to honorary membership in the Charlotte Alumni Chapter of Phi Psi, national textile fraternity.

Oliver P. Beckwith has joined Fabric Research Laboratories Inc., Boston, Mass., and has been placed in charge of a newly-created quality control group the purpose of which is to provide a consulting service in the field of quality control to industry. Mr. Beckwith formerly was director of quality control and chief of the product engineering laboratories for Alexander Smith & Sons Carpet Co., Yonkers, N. Y.

H. Merrill Bowman recently was elected vice-president in general charge of sales and advertising for American Pulley Co., Philadelphia. Since 1934 Mr. Bowman has worked continuously in the related fields of mechanical power transmission, materials handling, and processing equipment and installations. During that time he was with the Link-Belt Co. at Baltimore, Indianapolis and Chicago in various engineering capacities, in inside and outside sales work, in regional and product sales management, as well as in sales promotion and sales training activities. . . . Caleb F. Fox III, vice-president, and in charge of sales since January 1947, in the future will devote his attention to special corporate assignments.

Robert C. Wilkie

Robert C. Wilkie, inventor of the Pacific converter and other textile machines and processes, has been promoted to a new post—assistant director of research of the Pacific Mills craft fabric division (worsted operations). Before his advancement he was director of the engineering research department, research and technical laboratories. A graduate of Lowell (Mass.) Technological Institute, Mr. Wilkie was with Frosted Wool Process Co. before joining Pacific Mills in 1937.

Textile executives recently elected to various banking posts follow: William H. Grier, executive vice-president of Rock Hill (S. C.) Printing & Finishing Co., has been named to the board of directors of the Charlotte, N. C., branch of the Federal Reserve Bank of Richmond, Va. . . . C. A. Cannon, president of Cannon Mills Co., for 22 years president of Cabarrus Bank & Trust Co., Concord, N. C., has been elected to the newly-created post of chairman of the board. W. C. Cannon, vice-president and assistant secretary of Cannon Mills, was elected

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CHINTZ

CLINTON

STANDARDIZED
STARCHES
FOR THE SIZING
AND FINISHING OF
TEXTILES

CLINTON FOODS
INC
Corn Processing Division
CLINTON, IOWA

president of the bank. He had been a director for 14 years. . . . William H. Ruffin, president of Erwin Mills Inc., Durham, N. C., was elected a director of the Fidelity Bank in Durham. . . . L. G. Hardman, president of Harmony Grove Mills Inc., Commerce, Ga., has been re-elected president of the First National Bank in Commerce. . . . C. C. Dawson, executive secretary of the Southern Combed Yarn Spinners Association, has been elected first vice-president of the First Federal & Loan Association of Gastonia, N. C.

Jason M. Elsas, vice-president and general manager of the New Orleans, La., plant of Fulton Bag & Cotton Mills, Atlanta, Ga., has been named to the newly-created post of executive vice-president of the company. William N. Banks of Newnan, Ga., who heads a number of cotton textile plants in Georgia, was elected to Fulton's board of directors. . . . Clarence E. Elsas, Fulton's president, was re-elected president of the Textile Bag Manufacturers Association at the recent annual Winter meeting of the group in New Orleans.

R. H. Tuttle, formerly director of research and quality control, has been appointed manager of engineering, research, quality control and supply purchasing at Fieldcrest Mills Inc., Spray, N. C., reporting to E. W. Medbery, production manager. R. C. Tanner, formerly head of quality control, has been appointed director of research and quality control, reporting to Mr. Tuttle. . . . Other changes at Fieldcrest include: Ivar O. Moberg, special loom development engineer, transferred from research and quality control to the mechanical development department; R. A. Harris, formerly assistant manager of the blanket mill, appointed assistant comptroller; H. T. Bundy, assistant manager of the sheeting mill, named assistant manager of both the blanket and sheeting mills.

N. A. Gregory, vice-president of Erwin Mills Inc., Durham, N. C., recently was made a director of the Durham Rotary Club.

Dr. Robert W. Work and Dr. Russell O. Denyes have been promoted to new positions with Celanese Corp. of America. Dr. Work, formerly assistant manager in charge of textile division process research at the Summit, N. J., laboratories, was named assistant manager of plant operations for the textile division. Dr. Denyes, former head of viscose and new fiber research at Summit, succeeds to the post vacated by Dr. Work.

H. S. Mackie, purchasing agent and assistant vice-president of Textiles Inc., Gastonia, N. C., recently was elected chairman of the Gastonia Industrial Diversification Commission for the coming year.

Robert C. Brownlee, for the past 25 years business manager of Erskine College, Due West, S. C., recently was elected treasurer and a director of Hunt Loom & Machine Works Inc., Greenville, S. C. Mr. Brownlee succeeds W. E. Henderson as treasurer. Mr. Henderson continues with the company as a vice-president and director and will be identified with the sales department. . . . E. W. Siegler, vice-president in charge of manufacturing at Abney Mills, Greenwood, S. C., also was elected a member of the Hunt board of directors.

J. Clint Johnston

J. Clint Johnston has been appointed general manager and assistant to the president of Hayssen Mfg. Co., Sheboygan, Wis. A Westerner who has represented Hayssen for 13 years, Mr. Johnston served for seven years as divisional sales manager out of Portland, Ore., San Francisco, Calif., and Louisville, Ky. He started his career as a service engineer on all makes of packaging machines.

William A. Broadfoot has been elected president of United States Finishing Co. succeeding Donald B. Derby, resigned. Mr. Broadfoot, president of Aspinook Corp., was named vice-chairman of the board of United States Finishing Co. when the two firms merged last year.

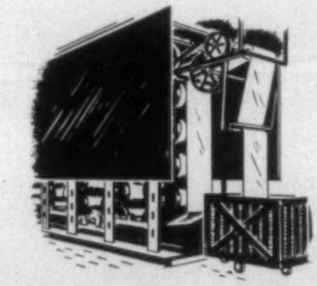
Clarence Taggart has been elected a vice-president of Riegel Textile Corp. He will continue as manager of the cotton finished goods department, a position he has held since he joined the company in 1948. Prior to his association with Riegel, Mr. Taggart was connected with the shirting department of J. P. Stevens & Co. in New York. From 1924 to 1937, he was assistant superintendent of Luther Mfg. Co., in Fall River, Mass.

A. W. Vint has been named director of research for American & Efird Mills Inc., Mount Holly, N. C. For the past five years Mr. Vint has had his own business in industrial fabrics and has acted as consultant in the tricot industry. A graduate of the Massachusetts Institute of Technology, Mr. Vint was for a while on the M.I.T. staff and later was associated with Boston Woven Hose & Rubber Co., Kendall Mills and Vanity Fair Mills.

F. E. Glotfelty and R. G. Ruark have been elected vice-presidents of Corn Products Refining Co. Mr. Glotfelty also was made a director. Mr. Glotfelty has been with the company since 1920 and Mr. Ruark since 1944.

Kenneth Mitchell has replaced Melvin Hopkins, resigned, as foreman of the dyehouse at Elberton (Ga.) Mills, a unit of United Merchants & Manufacturers Inc. Mr. Mitchell formerly held a similar position at Tape-Craft Inc., Anniston, Ala.

Arthur F. Smith and Preston F. Tinsley have been appointed assistant managers of sales, Westvaco chemical division, Food Machinery and Chemical Corp., New York. Westvaco chemical division is sales agent for the recently-formed F.M.C. operating divisions, Westvaco mineral products division and Westvaco chlor-alkali division.



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Mr. Smith joined Westvaco in 1941. After representing the company in the New England and Ohio territories, he successively became divisional sales manager of the Barium chemicals division, the solvents division and the chlor-alkali division. Mr. Tinsley has been with Westvaco since 1939. He was district sales manager in Charlotte, N. C., until late 1941. From 1942 to 1946 he was in the Armed Forces. From 1946 he has successively been district sales manager in Cincinnati and New York prior to his appointment as director of district sales in 1952.

Dr. H. H. Cudd

Dr. Herschel H. Cudd has been appointed to a newly-created position of manager of research and development by American Viscose Corp. Dr. Cudd has resigned as director of the engineering experiment station at Georgia Institute of Technology and will occupy his new post effective April 1. In the new position, Dr. Cudd will be responsible for the research and development activities of the various departments and pilot plants of the company and will have charge of co-ordinating and planning an expanded research program designed to improve present products and to develop new products. Dr. Cudd obtained an M.A. in 1936 and a Ph.D. in chemistry in 1941 from the University of Texas. He began his career as a research chemist with Du Pont, and from 1942 to 1946 was supervisor of inorganic research at International Minerals and Chemical Corp. Dr. Cudd has a background in textiles, having been associated from 1946 to 1950 with West Point (Ga.) Mfg. Co. He resigned from West Point to take a position on the staff of the engineering experiment station of Georgia Tech in 1950. There, he was first head of the chemical sciences division and was appointed director of the station in July 1953.

Miss Jane Cagle, secretary to T. M. Forbes, executive vice-president of the Cotton Manufacturers Association of Georgia, recently was honored guest at a surprise testimonial dinner given at the home of Mr. Forbes in Atlanta, Ga., marking the completion of 25 years of service to the association by Miss Cagle. She was presented a set of luggage.

William R. Burks has been appointed general traffic manager for the Chemstrand Corp., Decatur, Ala., and will be in charge of traffic activities for both Chemstrand's Acrylic fiber manufacturing plant at Decatur and the nylon plant at Pensacola, Fla. Before joining Chemstrand in 1951 Mr. Burks was with the Sylvania division of American Viscose Corp.

Dr. Robert W. Work, formerly assistant manager in charge of textile division process research at the Summit, N. J., laboratories of Celanese Corp. of America, has been named assistant manager of the division plant operations. . . . Dr. Russell O. Denyes, head of viscose and new fiber research at Summit, takes over the post formerly held by Dr. Work.

R. G. Thatcher Jr.

Richard C. Thatcher Jr., assistant vice-president of Standard-Coosa-Thatcher Co., Chattanooga, Tenn., has been elected a director. He is also assistant sales manager and for the past five years has been in charge of thread sales. Mr. Thatcher fills the position of the late T. R. Preston. Mr. Thatcher is the grandson of one of the founders of Standard-Coosa-Thatcher Co.

James D. Sandridge, since 1936 assistant manager of the organic chemicals department of E. I. du Pont de Nemours & Co. in Charlotte, N. C., will retire in March under the company's compulsory retirement policy. Mr. Sandridge joined Du Pont in 1919 when he established the company's dye and chemical laboratory in Charlotte. Before joining Du Pont he was with Federal Dyestuff Corp. at Kingsport, Tenn.

Appointment of Brainard T. Webb as vice-president to head new offices in Atlanta, Ga., was announced recently by William Iselin & Co. Inc., old-line factors whose business dates from 1808. The Atlanta offices are in the Palmer Building. The new Atlanta office under Mr. Webb

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has the responsibility of working on the development of new business for the company. Mr. Webb joined Iselin after a 25-year career with Powdrell & Alexander Inc. of Danielson Conn., during which he rose to the presidency.

G. M. Ferree, since April 1936 superintendent of the throwing plant of Adams-Millis Corp. at Tryon, N. C., retired Jan. 31. Mr. Ferree joined Adams-Millis as foreman of the second shift in the throwing department on Feb. 20, 1933, and was promoted to superintendent three years later. . . . Craig S. Hancock has been promoted from foreman of the throwing department to superintendent, succeeding Mr. Ferree. Mr. Craig has been employed in the throwing department since 1933.

Theodore A. Haschke has been appointed director of sales of the newly-organized industrial chemical division of Stauffer Chemical Co., its subsidiaries and associated companies, to take care of the increased scope of Stauffer's activities in this important field. Mr. Haschke started in the chemical business in 1919 and joined Stauffer seven years later. He was named sales manager of the Eastern division in 1942, a post he held until this latest promotion.

David E. Pierce, nationally known chemical engineer, author and lecturer, has been appointed to the newly-created position of director of manufacturing control at Diamond Alkali Co., Cleveland, Ohio. In joining Diamond, Mr. Pierce leaves New York where he has operated his own consulting engineering business for the past year. His previous associations include General Aniline & Film Corp., Rohm & Haas Co., Atlantic Refining Co. and E. I. du Pont de Nemours & Co.

Thomas E. Lawson has been promoted from superintendent of the Granby Plant of Pacific Mills at Columbia, S. C., to assistant manager of the Columbia Division. Mr. Lawson has been associated with Pacific Mills since 1945. . . . Robert G. Sharpe, formerly assistant superintendent, has been named superintendent at Granby succeeding Mr. Lawson. . . . Two other promotions at Granby include: Willie Crim, from second hand to overseer of weaving; and Joseph A. Birchmore, from loom fixer to second hand in the weaving department. Mr. Crim has been with Pacific Mills since 1928 and Mr. Birchmore since 1943.

OBITUARIES

William Amory, 84, board chairman of Pepperell Mfg. Co., died recently. Mr. Amory became associated with the company in 1907, having previously been connected with Amory Mfg. Co. from 1892 to 1897 and with Amoskeag Mfg. Co. until joining Pepperell. Mr. Amory is survived by his wife and a sister.

Thomas J. Lillard, 95, retired textile executive of Charlotte, N. C., died recently. Mr. Lillard was at one time secretary of the former Fidelity Mills, Charlotte, N. C., and secretary and treasurer of Jewel Cotton Mills, Thomasville, N. C. Mr. Lillard is survived by a daughter.

Edward Maag, 75, owner and president of Edward Maag Corp., New York, manufacturer and designer of special decorative fabrics and trimmings since before the turn of the century, died Jan. 28 at a hospital in Mount Vernon, N. Y. Surviving are his wife, a son, a daughter and two sisters.

William B. McNeely, 75, a former overseer of carding and spinning at Mooresville (N. C.) Mills, where he was employed for 38 years, died Jan. 29 at a hospital in Concord, N. C. At the time of his death he was employed at Plant No. 4 of Cannon Mills Co. in Kannapolis, N. C. He is survived by his wife.

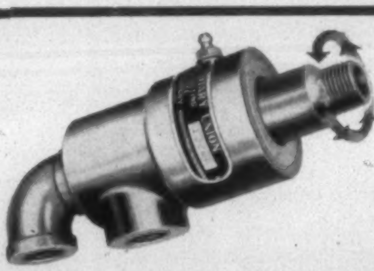
William H. Regnery, 76, president for almost 50 years of Joanna Western Mills Co., of which Joanna (S. C.) Cotton Mills is an affiliate, died Jan. 16 at a hospital in Hinsdale, Ill. Born on a farm in Wisconsin Oct. 12, 1877, Mr. Regnery and his family later moved to Iowa. At the age of 13 he went to Kansas City, where he clerked in a store. After several years he became associated with William Volker and was sent to Chicago to look after the Volker interests in the Western Shade Cloth Co. Mr. Regnery later became president of Western Shade Cloth Co. In order to control the quality of cloth for shades, Mr. Regnery and Mr. Volker in 1927 invested heavily in Joanna (S. C.) Cotton Mill properties, later buying all outstanding stock. Immediately an expansion and modernization program was launched which saw the Joanna plant grow from 30,000 to 103,176 spindles. That the welfare and contentment of his employees were uppermost in Mr. Regnery's mind is evidenced by his many contributions to their betterment. He was one of the first textile executives of the Piedmont area to share his company's profits with his workers and to give vacations with pay. He is survived by his wife, one daughter, and four sons: William F., Fred L., and Henry Regnery, all of Chicago and connected with the Chicago plant; and Walter Regnery of Joanna, vice-president of Joanna Western Mills Co. and executive officer of the Joanna, S. C., plant.

Eugene Reneau, 44, superintendent of Gastonia (N. C.) Weaving Co., died Jan. 25. Survivors include his wife, two sons, one daughter, two brothers and two sisters.

Harold W. Rogers, 70, who retired as engineering consultant for the paper and textile division of General Electric in May 1948 after 42 years with the company, died Jan. 21 at a hospital in Schenectady, N. Y. Mr. Rogers is survived by his wife, a daughter, a brother and a sister.

Mrs. Rosa Eleanor Fried Willingham, 66, president of Indera Mills, Winston-Salem, N. C., from 1931 to 1953, died Jan. 30 after suffering a heart attack. Mrs. Willingham succeeded her father as president of Indera Mills upon his death in 1931 and held the position until her son, Frank F. Willingham, succeeded her early last year. Her father was the founder of Indera

William Cleveland Ward, 69, vice-



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president and treasurer of Southern Mercerizing Co., died Feb. 6 at Tryon, N. C., following a brief illness.

Kerr Wilson, 97, retired textile executive of Greenville, S. C., died recently. Mr. Wilson became associated with the old Huguenot Cotton Mill, Greenville's pioneer textile plant, in 1892; later operated another textile plant, and for 15 years was traveling. He is survived by his wife and a daughter.

Jacques P. Wolf, 80, founder and president of Jacques Wolf & Co., manufacturer of textile chemicals, oils and finishes, died recently. Mr. Wolf came to the United States in 1901 from his birthplace in Alsace.

MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

THOMASTON, GA.—The B. F. Goodrich Co., which operates its Martha Mills tire cord plant here, recently donated property in nearby Silvertown for the erection of a $34,000 State Patrol barracks. Deed to the property was presented to Upson County officials by S. W. Hempstead, general manager of Martha Mills.

ROANOKE, VA.—American Viscose Corp. recently announced that it plans to discontinue production of high tenacity rayon tire cord fabric at its plant here, probably by June. A war-born operation for Firestone Tire & Rubber Co., the production of the tire cord fabric was started at the local plant in 1943. Curtailment will be gradual in an effort to absorb as many as possible of the 300 workers employed in that operation into other departments.

DILLON, S. C.—Carolina Mills Inc. may be reopened soon. Judge Ashton H. Williams, following a hearing in U. S. District Court recently in Charleston, announced that he would approve a plan of reorganization for Carolina Mills Inc. as proposed by Credit Industrial Corp. of New York, holder of a first mortgage and on behalf of a creditors' committee representing 90 per cent of all unsecured creditors. It was reported that the plan calls for reopening of the mill as soon as possible, if it can be done without financial loss and is in no sense a liquidation.

GRAHAM, N. C.—Ginny Lynn Mills Inc. has been granted a state charter of incorporation to deal in textile products of all kinds. Authorized capital stock 1,000 shares no par value, subscribed stock three shares no par value by Coleman T. Bahn of Brookline, Mass.; A. Wilcher, Manchester, N. H.; and Don E. Scott Jr., Graham.

DANVILLE, VA.—Dan River Mills Inc. has announced plans for the expenditure of about $2,500,000 for machinery during 1954. The company spent $1,500,000 for new machinery last year. New equipment valued at about $1,500,000 has already been ordered, and purchase of additional machinery to the extent of another $1,000,000 is being considered by officials. Emphasis will be put on equipment for the opening, picking, carding, spinning and winding operations.

CARROLLTON, GA.—J. R. Newell Co. has been organized here to manufacture novelty yarns. Dick Newell, former president and treasurer of Mandeville Mills Inc., has purchased the novelty yarn equipment of Mandeville and has formed the new company. The new yarn mill will make twisted novelty yarn primarily for the drapery and upholstery industry. Mr. Newell has purchased twisting equipment and some winding equipment only of Mandeville. He expects to operate this equipment in its present location for the time being but will erect a building later. He will sell through Robinson Textile Co., Southern selling firm being organized by Hoke S. Robinson in the South, and Schoolfield & Co., New York. Schoolfield was formerly sole selling agent for Mandeville.

RICHMOND, VA.—The Du Pont Co. plans to discontinue production of textile rayon yarn at its plant here, for an indefinite period, and to concentrate on the production of Super Cordura and Cordura high tenacity rayon yarn. All types of textile rayon yarn presently produced at the Richmond plant will be supplied from the Old Hickory, Tenn., plant.

CRAMERTON, N. C.—Contract has been awarded to John V. Barger & Co. of Mooresville, N. C., for construction of a $56,000 addition to the Mays Plant of the Cramerton Division of Burlington Mills Corp.

LINCOLNTON, N. C.—Cotton Mill Machinery Co. Inc. of Charlotte, N. C., recently purchased the property of Smith Mills Inc. here. The new owners will sell the mill equipment and either lease or sell the buildings. Equipment to be sold includes: 4,500 spinning spindles and 2,200 twisting spindles, 16 cards and auxiliary equipment for 30/2 carded yarn. Before closing down the plant was operated under the control of L. P. Muller & Co., Philadelphia, Pa.

CLOVER, S. C.—Employees of the local plant of American Thread Co. recently completed 1,000,000 man-hours without a lost-time accident. In recognition of the record, the National Safety Council's Green Cross flag was raised over the plant office by the mayor of Clover.

GASTONIA, N. C.—A 12,500 square foot addition is under construction at Firestone Textiles to provide space for the increased production of rayon tire cord. The Gastonia plant will take up the work being discontinued in Roanoke, Va., where Firestone is terminating its plant lease agreement with American Viscose Corp.

GREENWOOD, S. C.—The new $6,000,000 Durst Plant of Greenwood Mills, one of the few cotton mills to be built in the last two decades, is now running at about 50 per cent of its ultimate capacity and by early Summer is expected to begin full operations. Some of the machinery for the huge plant, which is 1,200 feet long and covers ten acres, is still being installed. The plant is so built that the entire operations in the manufacture of cotton goods can be carried out on one floor. The single-story, air conditioned mill, which is in sight of Mathews Mill, the parent plant, was designed under the guidance of James C. Self Sr., president of Greenwood Mills. Two years ago Greenwood Mills built a $6,000,000 rayon mill, known as the Harris Plant, near Greenwood. The post-war modernization and expansion program of Greenwood Mills has run well over $20,000,000 and plans now in the making call for a new power plant capable of producing electric current for all units of Greenwood Mills with some to spare. The present power plant, erected about 20 years ago, will be left as a standby. The new plant will utilize the latest development known as the cyclone pressurized boiler, and will be the first one of its type in the South. Durst Plant is the fifth unit of Greenwood Mills, the others being Harris, Mathews, Greenwood and the plant at Ninety-Six, near Greenwood. Mathews, Greenwood and Ninety-Six plants have undergone multi-million dollar post-war modernization programs. F. T. Hurt has recently been appointed superintendent of the new Durst print cloth mill. R. A. Liner, with the Greenwood Mills organization

TOP HONORS in the Goodyear Tire & Rubber Co. Worldwide Safety Contest for 1953 went to the Akron, Ohio rubber firm's textile plant at Decatur, Ala. Employees at the Alabama mill worked 1,203,316 man-hours without a lost-time accident last year. Shown receiving the safety trophy from Fred W. Climer, Goodyear's vice-president in charge of industrial relations *(left)*, are W. S. Hunter, Decatur mill personnel manager *(center)*, and C. W. Young, the mill superintendent. The Alabamans won the award in a competition among 71,000 Goodyear workers with more than 154,000,000 man hours worked.

since his graduation from Clemson College, is assistant superintendent. Other recent appointments include: Ralph Kelly, overseer of shop; James W. Anders, warehouseman; W. T. Harris, overseer of carding; James O. Bolton, overseer of cloth room; F. R. Simmons, overseer of weaving; and T. F. Snipes, overseer of spinning.

JOHNSONVILLE, S. C.—Providence (R. I.) Combing Co. recently announced that it plans to liquidate its plant in Providence and move to Johnsonville. A company spokesman said the reasons for the move were "economic, one of the principal ones being to enable the company better to serve its customers."

NEW YORK, N. Y.—New high records in industrial safety performance were registered in 1953 by Celanese Corp. of America, as the company-wide accident frequency rate dropped to 1.3 for each million man-hours worked in comparison with a 1952 national average of 8.4 accidents per million man-hours worked for all American industry. This achievement came to light with the announcement of results of the company's safety contest in which all plants and facilities competed for the annual Harold Blancke Safety Award. The top honor for 1953 was captured by the Cumberland, Md., acetate yarn producing plant with a record of less than one lost-time accident for each million man-hours. The actual accident frequency rate of the Cumberland plant was 0.81 per million man-hours worked, which represented a major improvement over the preceding year's rate of 3.53. On two separate occasions during the year the plant achieved a record of operating 2,000,000 continuous man-hours without a lost-time accident. Certificates of commendation in the annual contest were won by seven units which scored perfect records by not having a single lost-time accident. They were the Hopewell, Va., dyeing and finishing plant; the Burlington, N. C., spun yarn plant; the Pampa, Tex., chemical plant; the Summit, N. J., and Clarkwood, Tex., research laboratories; the central trucking facility at Cumberland, Md., and the New York warehouse. The Burlington, N. C., plant of the company has not had a lost-time accident in approximately four and a half years. The last accident of this nature was reported on Sept. 23, 1949.

LANCASTER, S. C.—Springs Cotton Mills announces the ordering of $5,000,000 worth of equipment for installation this year. The orders include bleaching and dyeing equipment, air conditioning equipment, superdraft for the remainder of the spinning frames, spoolers, warpers, wide-sheeting looms and spindles. The company also announced that it is considering the construction of two new warehouses, excavation of a basement under one plant, a nylon tricot knitting unit for sheets and pillowcases, a swimming pool and additions to two golf clubhouses. The announcement did not indicate which plants would be involved.

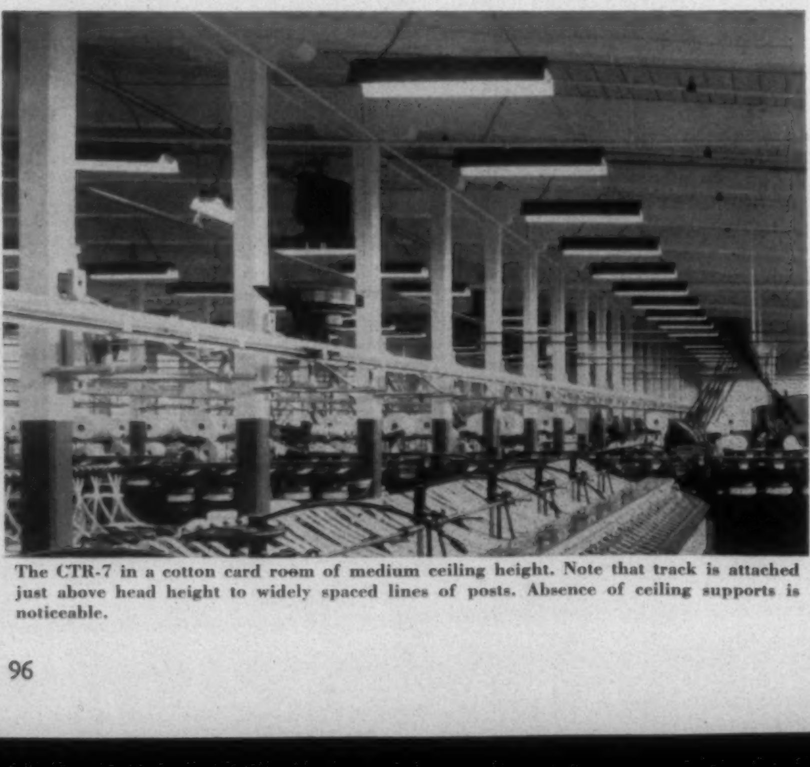
For the Textile Industry's Use

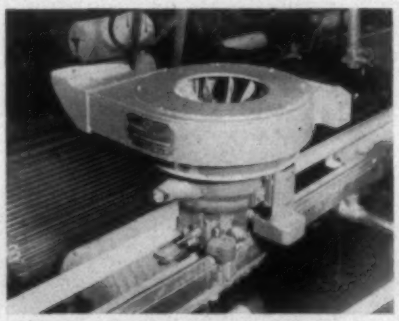
EQUIPMENT — SUPPLIES — SERVICES — LITERATURE

Parks-Cramer Room Cleaner

A product of 28 years' experience in designing, manufacturing, and installing traveling cleaners for textile machinery and overhead surfaces, the new Parks-Cramer Type CTR-7 room cleaner has just been announced after a year of successful operation in cotton and cut synthetic mills. This new room cleaner is said to be more powerful than any previous Parks-Cramer room cleaning model. It carries a larger motor and a pressure type fan which delivers more air at higher velocity than heretofore.

The air distributor of the Type CTR-7 cleaner contains several separate air outlets, each at a different angle to the vertical. The new cleaner retains the exclusive Parks-Cramer up-draft cleaner feature, revolving its inclined air currents continuously in a complete 360° circle about a vertical axis as the cleaner unit travels along the track. These several features result in a stronger cleaning action and a much wider coverage. Thorough cleaning is thus secured from less track in rooms of either high or low ceiling. Track may be located low down in the room and farther apart than previously. Posts and walls may be utilized for track supports, with a minimum need for supports from the ceiling.


The CTR-7 in a cotton card room of medium ceiling height. Note that track is attached just above head height to widely spaced lines of posts. Absence of ceiling supports is noticeable.


Close-up of Parks-Cramer CTR-7 room cleaner.

In some departments, track for the room cleaner is supported from machines. In spinning rooms, the room cleaner may be coupled to the Parks-Cramer frame cleaner. Different air distributors are available. Number, shape, direction and velocity of air currents—upward, sidewise, and in some cases downward—are suited to the cleaning requirements in each mill area.

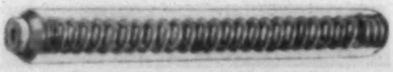
The new room cleaner is said to be so thorough in its cleaning action that the customary hand blow-down of overhead areas are eliminated in most cases after the room cleaner is installed. Maintenance costs are thereby reduced, production is increased, product quality is improved, and the problems of housekeeping are greatly simplified.

Illustrated is an installation of the new cleaner in a cotton card room of medium ceiling height. Note that the track is attached just above head height to widely spaced lines of posts. The absence of ceiling supports is noticeable.

Additional information on this and other traveling cleaners is available from Parks-Cramer Co., which may be addressed in care of this publication.

(Request Item No. B-1)

Washburn Temple Roll

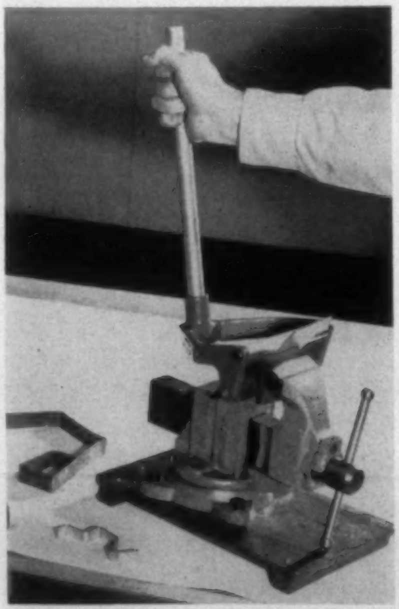


Washburn's new temple roll.

A new temple roll to be used on looms weaving fine delicate fabrics has been made available to the textile trade by "Washburn," according to its inventor, Frederick C. Washburn. This new temple roll, known as Tensionhold, employs a tempered steel compression spring core, covered with a specially processed rubber. In weaving cloth which has a high degree of contraction the pull of the cloth axially automatically compresses the roll, thus enlarging it to a greater degree, therefore gripping the cloth more firmly. The greater contraction the greater the compression, thus a stronger grip on the cloth itself and not just the selvage. The fact that these rolls can be re-covered an infinite number of times adds much to their value. For further information regarding "Tensionhold" temple rolls write "Washburn," care of this publication.

(Request Item No. B-2)

Bendit Jr.



Bendit Jr. for forming, shaping and bending sheet metal.

Lund Mfg. Co. announces availability of a new low-cost machine for bending, forming and shaping sheet metals, the Bendit Jr., developed to simplify most bending jobs in textile plant machine shops or for anyone who has a need to bend a piece of metal. It fits any ordinary machinist vise with jaws

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February 1954

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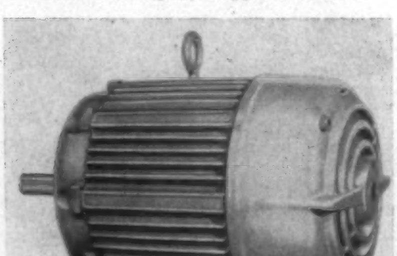
up to 4½ inches wide. Further details concerning the Bendit Jr. may be obtained on request to this publication.
(Request Item No. B-3)

New Louis Allis Motors

Louis Allis open, dripproof motor.


Louis Allis totally-enclosed, fan-cooled and explosion proof motor.

A completely redesigned line of electric motors to meet new N.E.M.A. rating standards has recently been announced by the Louis Allis Co. These new motors are available in all standard enclosures—open, dripproof; totally-enclosed, fan-cooled; and explosion-proof. They are built up to frame size 326 (40 horsepower at 3,600 r.p.m.).

Known as the L. A. line, these motors utilize many years of progress and improvement in motor design, materials, and manufacturing methods—as well as new N.E.M.A. frame size standards. As a result of the redesign, they provide more power in a smaller, more functional package. Other features of the new line include new modern styling; improved ventilation; and greater protection. The new line also has new conduit box arrangement; more versatile mountings; and lighter weight without loss in mechanical strength.

Conformance to smaller external dimensions—without sacrificing motor service factors or liberality of design—has been accomplished by using larger lamination diameters and longer stacking with shorter coil ends.

Further information about the L. A. line of electrical motors is available on request to this publication.
(Request Item No. B-4)

Teflon Sealing Compound

Eco Engineering Co.'s chemical products division announces that T-Film, the Teflon-base thread-sealing compound, can now be furnished with added dry pigment lubricants, such as graphite, molybdenum sulfide, lead or copper. Developed for highly specialized applications, stabilized pigment dispersions provide for lower sealing torques, especially in low temperature applications. This forms a continuous film, preventing spiral wicking and leakage of material being conveyed. T-Film is suitable for pressures from minus zero to plus 400° F. It is offered in two-ounce jars and four-ounce jars. The manufacturer states two ounces will seal between 30 and 40 joints in one inch P. T. pipe. (Request Item No. B-5)

Synthane Redraw Cap

A one-piece laminated plastic redraw cap for Dacron shipping tubes have been announced by the textile division of Synthane Corp. Especially designed to provide universal service on all current Dacron shipping tubes regardless of inside diameter variations, the new cap fits all tubes snugly, yet may be instantly snapped on or off. Made of strong, durable paper-base Grade XX Synthane, the new redraw cap is machined to an extremely smooth, non-snag finish. The cap is fabricated in one piece from tubular stock and is slotted to provide a firm friction fit. For further information write the Synthan Corp., care of this journal. (Request Item No. B-6)

Redesigned Precipitator

The Electro-Cell electronic precipitator has been redesigned to provide semi-automatic reconditioning of the collector plates. The recently developed Type H washer washes the collector plates with water sprays and recoats them with a dust holding adhesive. The entire operation is automatic after a starting button is pushed. The Type H washer is optional equipment available for all sizes larger than six feet high by six feet wide. Made by American Air Filter Co. Inc. Bulletin 252-E3 issued free upon request. (Request Item No. B-7)

Cratex Mfg. Co. Catalog

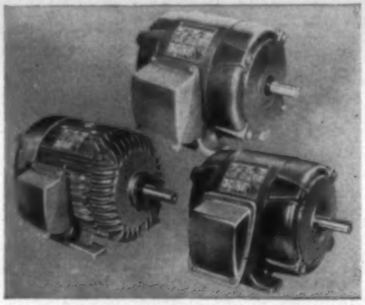
A most valuable treatise on the adaptability and application of rubberized abrasives, together with complete specifications is contained in the new illustrated Cratex Catalog No. 53. A specific feature of the catalog is the pertinent information on four standard grit types, ranging from relatively coarse to extremely fine textures, and the detailed application of each type to attain the desired end result on hard or soft metals and other materials. The new Catalog No. 53 is available free from Cratex Mfg. Co., address request to this publication.
(Request Item No. B-8)

O.C.M. Catalytic Exhaust

The O.C.M. catalytic exhaust is now available for plant installation on gasoline-powered lift trucks manufactured by Clark Equipment Co. The O.C.M. catalytic exhaust, manufactured by Oxy-Catalyst Inc., oxidizes more than 95 per cent of the carbon monoxide and hydrocarbons in the engine exhaust, converting them into harmless carbon dioxide and water vapor. In so doing, it removes the hazard of carbon monoxide and hydrocarbons when gasoline engines are operated indoors.

Standard sizes of O.C.M. catalytic exhausts has been—and still are—available for installation on Clark equipment by the truck dealer or by a mechanic in the plant. In these cases the regular truck muffler is removed and an O.C.M. unit is installed in its place. When plant installed, the O.C.M. catalytic exhaust is simply put on the truck in lieu of the regular muffler.
(Request Item No. B-9)

New Induction Motor


Life Line-A induction motors.

A new induction motor—the Life Line-A —designed to offer users longer motor life, greater flexibility in application, and higher reliability as well as decreased size has beeen announced by the Westinghouse Electric Corp. The Life Line-A, it is claimed, has improved ventilation, better insulation, a more efficient and better protected bearing, and in addition is quieter and smaller per horsepower, conforming to the new N.E.M.A. standard dimensions. It is available in three enclosures: totally-enclosed fan cooled, totally-enclosed non-ventilated, and dripproof. (Request Item No. B-10)

New National Dyes

The addition of three new dyestuffs to its line is announced by the National Aniline Division of Allied Chemical & Dye Corp. National Naccogene Blue DGN Powder is another addition to National's line of stabilized azoic dyes. National Solantine Brown 3RL is the latest addition to National's line of non-dusting, light-fast dyes. National Solvat Blue 4B is a leuco vat ester dye, producing when dyed or printed on cotton and rayon, bright blue shades.
(Request Item No. B-11)

Dexter Dyeing Assistants

Four dyeing assistants of the nonionic type are being offered to the textile industry for the first time by Dexter Chemical Corp., Joseph B. Evans, director of sales, announced. The decision to enter the nonionic field with polyoxyethylated fatty alcohols comes after several years of market analysis and research by Dexter, Mr. Evans said, and that the textile chemical company had launched a sales and advertising program with the theme of "Four Aces of Dyeing." The products are Telkanol O, Dextrol Fast Salt M, Rexan O and Telkanite M.

Telkanol O is claimed to be an effective leveling agent and dyeing assistant for wool, and especially for unions of wool and synthetic fibers such as spun rayon, Orlon, Dacron and nylon, as well as wool and cotton. Dextrol Fast Salt M is said to be a dyeing assistant for acid metallized dyestuffs on wool which reduces the amount of sulfuric acid normally needed, thereby holding to a minimum any loss of tensile strength of the fiber. Level dyeing and penetration with direct, basic and vat dyestuffs is attributed to Rexan O on all fibers except wool. Dexter claims Telkanite M to be a highly effective stabilizing agent and assistant for all types of naphthol dyeing and printing. (Request Item No. B-12)

Variac Speed Controls

Power ratings for the General Radio Variac motor speed controls now extend from 1/15 to 1½ horsepower. These models use the same basic system of control as the earlier units, and make possible the complete elimination of electron tubes or rotating machinery in operating d-c motors from a-c lines. The Variac motor speed controls can start motors slowly and smoothly. This feature is very important for many critical applications such as winding machines, lathes, etc. Similarly the virtual elimination of torque pulsation makes these controls valuable in precision grinding work and similar applications. Reversing of the motor is obtainable in all models and dynamic braking is provided in all but the smallest size. In addition to the nine standard models, special controls for specific applications can be made to meet customer requirements. (Request Item No. B-13)

Rohm & Haas Booklet

Rohm & Haas Co. has made available to the industry an eight-page booklet listing the various chemicals manufactured by the company for the textile industry. The products are classified by groups according to their main field of application. Request Booklet No. T-25, care of this publication. (Request Item No. B-14)

Sinfra-Knit Rug Manufacture

Additional information on the Sinfra-knit method of manufacturing rugs has been released by Fidelity Machine Co. The new machine is designed to replace conventional braiding machines by increasing production considerably.

Fidelity Model C-1HLR-8 gauge knits a covering on filler at speeds up to 2,520 feet per hour. The Sinfra cover consists of two intertwined knitted coverings. The stitches of the first covering cover the connecting yarn of the second covering, and the stitches of the second covering cover the connecting yarn of the first covering.

After the Sinfra knit cover has been applied to the core material, coils of the resultant material are then joined by use of a zig-zag type sewing machine.

Each individual covering is built up by four yarns spread equally over its circumference. The four yarns of the second covering are symmetrically arranged between the four yarns of the first covering, resulting in an eight yarn layout. Yarn groups may substitute for each yarn. The machine is designed to handle eight or 16 cones on the upper supporting rack while the lower rack carries spares for continuous operation. Rewinding equipment is unnecessary since large size cones can be used just as they come from the mill.

The knitting head is comprised of 16 needles—eight long and eight short, alternately spaced. The filler yarn passes through the knitting head. The covered core passes through a softening device and is drawn through by the capstan. The covered core then enters the coiler head on the way to the roving can. A predetermined counter is set for the desired number of feet and the machine automatically stops when this footage is attained.

The intertwining of the yarns or yarn groups gives a unique lock stitch which prevents loosening and unravelling and the spiralled stitches prevent bursting of the cover from bending or twisting. Either round or rectangular fillers can be covered by the Sinfra machines. There is no limit, either, to the possible color combinations.

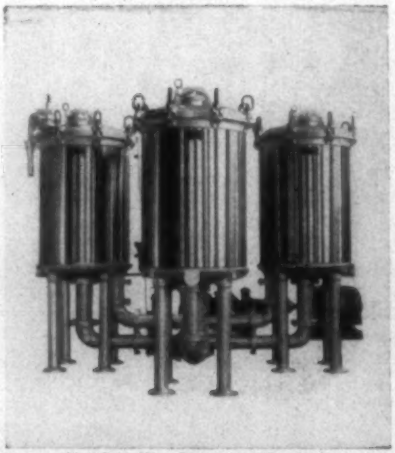
Although designed primarily for rug making, Sinfra machines can cover fillers for a variety of industrial applications. (Request Item No. B-15)

Chromalox Radiant Panels

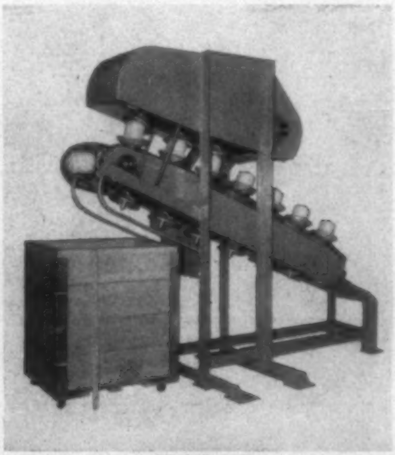
Introduction of a new heavy-duty infrared generator for high-intensity heating requirements is announced by Edwin L. Wiegand Co. The generator—a Chromalox electric radiant heating panel—has been espe-

Today's Most Rugged - Most Economical

MODERN DYEING EQUIPMENT

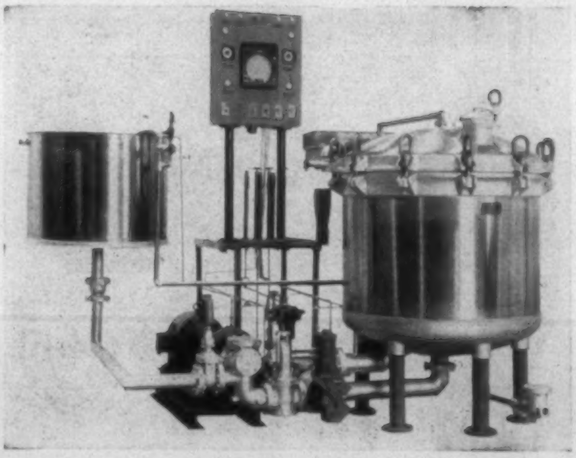


Multiple-Kier Beam and Package Machine . . . 1 to 6-Kier Setups



High-Speed Package Shaper

Gaston County offers you a complete line of today's most rugged dyeing equipment . . . engineered with the most modern automatic controls for high-pressure, high-temperature dyeing essential for today's new yarns.



Single-Kier Package Dyeing Machine

GASTON COUNTY DYEING MACHINE CO.

Pioneers In Automatically Controlled Dyeing Machinery

STANLEY N. C., U. S. A.

Gaston County Dyeing Machine Co.
Terminal Bldg., 68 Hudson St.
Hoboken, N. J., G. Lindner, Mgr.

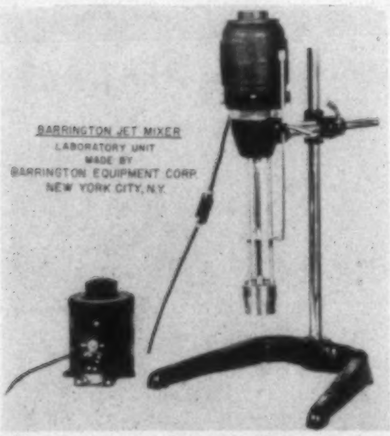
The Rudel Machinery Co., Ltd.
614 St. James St. W., Montreal
137 Wellington St. W., Toronto

cially designed and constructed for web-fed processes in the textile industry. The new panel, measuring 66 inches by 12 inches, has been built to span large webs and is an addition to a wide range of other Chromalox infrared equipment.

The following are some suggested textile uses of Chromalox radiant panels: heat setting, heat stretching, tenter preheating, hot flue preheating, singeing, curing resin finishes, preheating and heating after treatment in dyeing Dacron with vat acid, permanent calendering and embossing. Further information available in Folder CS-606, available on request to the publication.

(Request Item No. B-16)

Hermas Jet Mixers



Barrington jet mixer now being manufactured by Hermas Machine Co.

Hermas Machine Co. announces that it has acquired the rights to manufacture the jet mixers developed by the consulting chemist and chemical engineer, David E. Gould, formerly vice-president of Barrington Engineering Co.

The jet mixers have been developed for the efficient wetting out and deflocculation of dye and pigment dispersions in liquid carrying vehicles in a wide range of viscosities from water thin up to 30,000 centipoise. These are portable type, high-speed turbine mixers for mixing in tanks, barrels, drums and kettles, operating at peripheral velocities along the circumference of the rotor in excess of 70 feet per second.

Hermas jet mixers are made in laboratory, pilot plant, and production sizes.

(Request Item No. B-17)

Hartuwet S

Hart Products Corp. announces the availability of a new product, Hartuwet S. Hartuwet S is said to impart an extremely durable water repellent finish to rayon blends, cotton, nylon, acetate, wool, Dacron, and Orlon fibers. It is a very stable milk-white silicone emulsion instantly dispersible in water. Fabrics treated with this new product are said to show likewise an increase in abrasion resistance up to fourfold, a greater tear strength, a marked improvement in sewability, a greater recovery from wrinkling, and an improved crisp resilient hand as well as spot and stain resistance. Hartuwet S, it is claimed, may be used in combination with the commonly used urea formaldehyde, melamine formaldehyde, and other resins. The manufacturer points out that Hartuwet S is easily applied from the usual padding equipment and is cured in the conventional tenter frame or loop drier.

(Request Item No. B-18)

Eriez Magnalarm

The perfection of a unique and completely automatic alarm system which dramatically enhances the efficiency and usefulness of magnetic separators by virtually eliminating the possibility of human error has been announced by Eriez Mfg. Co.

The new control, called Magnalarm, is said to set revolutionary operating standards for magnetic separators in the textile industry. Permanent magnetic equipment, increasingly relied upon to insure industry against product contamination, machinery damage, and even fire and explosion, operates automatically by removing the cause: tramp iron and ferrous particles in the production line. Now, Magnalarm guarantees the maintenance of this protection at peak efficiency—and at an actual saving of man-hours and production time.

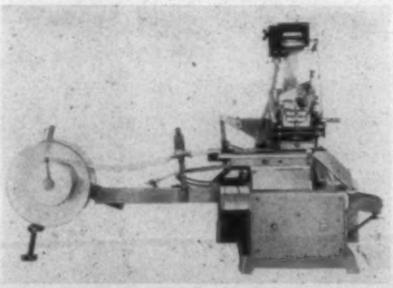
(Request Item No. B-19)

Ammonia-Leak Detector

A new pocket-size device for detecting ammonia leaks is announced by the nitrogen division of Allied Chemical & Dye Corp. The device consists of Sulfstix, or long sulphur-impregnated tapers in a container designed to be carried in a pocket or hung on the wall near ammonia equipment. Ammonia leaks can be detected by lighting a taper and holding it near equipment suspected of leaking. A white cloud will indicate the point of ammonia leakage. The tapers may be extinguished and reused. The Sulfstix device may be obtained free of charge by writing Allied Chemical & Dye Corp., care of this publication.

(Request Item No. B-20)

New Markem Machine



The Markem Model 56A for printing notched tickets, tags and labels in roll, fan folded or strip form.

A new Markem marking machine, especially designed for printing notched tickets, tags, and labels in roll, fan folded or strip form, features a new positive feed mechanism which insures exact printing registration. Manufacturers have found that the use of this machine results in savings to them because inventories of preprinted labels or tickets are no longer required. The method is much faster and neater than hand stamping. Complete label detail, or imprint on partially printed stock, is printed in exact quantities when needed.

The Markem Model 56A prints at the rate of 80 to 100 per minute and will either cut off and stack or rewind on a roll. The maximum imprint area is two by $2\frac{1}{2}$ inches. Rolls of labels or tickets up to $2\frac{1}{4}$-inch width by $3\frac{3}{4}$-inch length are automatically fed into the machine.

Type is quickly changed and is available in many sizes and styles. Special designs or trade marks may be duplicated. Markem inks are fast drying and available in many colors. The new machine is powered by a one-fourth horsepower gear reduction motor and occupies a bench space of 20-inch depth by 23 to 40 inches depending on size of paper roll. For further information contact the manufacturer, Markem Machine Co., care of this journal. (Request Item No. B-21)

Magnetic Cam-O-Tactor

A new magnetic contactor-type time delay speed controller for all makes and models of electrical industrial trucks has been developed by the Yale materials handling division, Yale & Towne Mfg. Co. Called the Yale Magnetic Cam-O-Tactor, it is designed to provide smooth acceleration under all operating conditions.

Cushioned accelerator action, through the simple time delay, results in uniform contact action regardless of the operator's rate of speed in depressing the pedal. In deceleration the magnetic speed contactors instantly break the circuit when the operator lifts his foot from the accelerator. There is, therefore, no time delay in deceleration. The Yale Magnetic Cam-O-Tactor consists of a magnetic contact unit and a master accelerating switch—the time delay unit. Simplicity of design has resulted in very few parts and in minimum maintenance costs.

(Request Item No. B-22)

1954 'Fiber Facts'

"Fiber Facts," a vestpocket booklet, which American Viscose Corp. publishes annually, is off the press. The corporation offers the fact-jammed handbook free to everyone in the trade and to textile students.

New this year is a 24-page diary, with space for each day in the year, and a longer and more complete list of Avisco products and packages. Included is a detailed listing of the various sizes of rayon yarn and staple, acetate filament, Filatex filament, Vinyon staple, and cellophane the corporation offers, together with the textile chemicals, other cellulose products, and plastic the company sells. The corporation offers a more complete list of rayon yarns than ever before, nearly all of them in a wide assortment of packages, from cakes and cones to warp beams.

As in the past, the booklet, now enlarged to 72 pages, gives the physical properties of all the major man-made fibers in handy form, and there is an up-to-date glossary of textile terms. Among the data included is a spinning twist calculator, denier conversion table, tables of warp and filling yarn requirements and yield, a bibliography of rayon publications, a fabric conversion table, tables of weights and measures with the metric equivalents, centigrade and Fahrenheit equivalents, and a 1954 calendar. This is in addition to such data about the corporation as its ten-year record of shipments, number of employees, dividends, and other financial information, as well as the addresses of all its offices and plants and the names of its principal managers.

(Request Item No. B-23)

New Type Tractor Lift

Market Forge Co. announces its new Tractor Lift for lifting and hauling factory floor trucks by power instead of manually. This Tractor Lift allows hand-propelled floor trucks or semi-skids to be handled by power for long hauls, or when heavy loads are involved. Many floor trucks of this type are provided with swivel casters which are not intended for fast hauling or easy maneuvering. However, they are usually provided with bottom sills which can be readily "grasped" by the special coupling arrangement so that one end may be lifted off the floor. Usually no modifications are necessary to the truck itself. The Tractor Lift may be used to lift the legs of semi-skids off the floor instead of using the hand skid jack.

Market Forge Co. has taken its standard Load Mobile tractor and designed a simple electric hydraulic unit for lifting and lowering by push button control. The driver does not leave his seat. With coupling arrangement in lowered position, he backs under the truck, then lifts and hauls truck away. The length of the tractor, exclusive of the coupling area is only 48 inches. The tractor is only 30 inches wide so that it can negotiate very narrow aisles. It weighs approximately 1,400 pounds with storage battery and has a draw bar pull up to 1,000 pounds (equivalent to five men or more) with a top speed over level floors of five miles per hour.

(Request Item No. B-24)

Training Film Available

The National Safety Council's new series of human relation training films for foremen is now available. Featuring O'Grady, the safety skeptic from the council's film, "A Gray Day for O'Grady," this three-film set tells how a foreman learns about people. "Fragile — Handle Feelings with Care" shows how a foreman learns to value and respect the feelings of his workers. "Call 'Em on the Carpet" shows the various methods foremen can employ to correct worker's faults without incurring ill will. "It's an Order" is a humorous film illustrating how supervisors should give orders so that they are understandable and can be carried out efficiently by the worker. Prepared under the supervision of the council's industrial department, the films run 12 minutes each and are available in 16mm sound movies as well as 35mm sound slidefilms.

For further information and prices write the National Safety Council.

(Request Item No. B-25)

M-H Pen-Lifter

An automatic pen-lifting device has been designed for single-record strip chart recorders, the industrial division of Minneapolis-Honeywell Regulator Co. recently reported. A special rod and lever arrangement, operated by a solenoid raises the pen clear of the chart depending upon the requirements of the application. For example, it can raise the pen either during "off" periods to prevent ink blots; during periods of either chart changing or when the chart is torn off the recorder, or when the measured variable falls below any selected value.

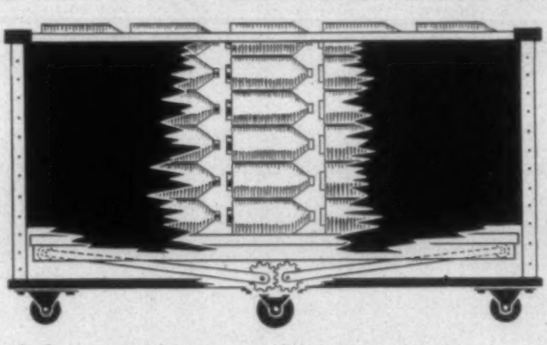
The pen lifter can be used either with conventional or ball-point pens and can be installed on instruments with either one or both left and right-hand operation pens. The device is also particularly useful on the firm's function plotter where a series of records may be made on the same chart. The pen lifter will prevent the pen from marking the chart during retrace.

(Request Item No. B-26)

Eye Savers Chemical Goggle

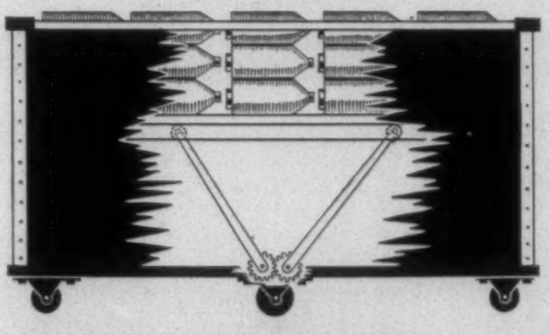
A new, soft vinyl frame safety goggle, for 100 per cent protection against chemical splash, moten metal, sparks and impact hazards is called Stac-Vent. The name comes from a new principle in goggle ventilation which prevents fogging by drafting off warm, moist air from the top and center of the goggle (where it normally accumulates) just as a chimney drafts off smoke. Large ventilation holes are possible because they are safely shielded by the Stac-Vent hood. A soft vinyl frame, with pliable edge-fins, yields to the contours of the face and nose, closing all gaps without pressure. The lightweight frame is comfortable to wear

The "General" No. 3000
Excel Truck with the
Auto-Magic Floating Bottom*



- Completely automatic. Spring action keeps load level always within easy reach of operator.
- Perfect stabilization prevents tilt or bind, always giving smooth level action regardless of position of load in either end or in both ends.
- No bend, no stoop. Eliminates backbreaking straining to reach bottom of truck.
- No cranking, no pumping. Requires absolutely no attention from the operator.
- Mounted rollers in edge of bottom give smooth, free flowing action up and down. Prevents binding or drag against sides and ends of truck.

*Pat. Pending



Made in Several Popular Sizes

REPRESENTATIVES

Mr. N. W. Eurey .... Lincolnton, N. C.
Mr. Paul Eurey .... Lincolnton, N. C.
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Fall River Mill Supply Co. .... Fall River, Mass.

EXCEL TEXTILE SUPPLY CO.
"Excel Trucks Excel"
LINCOLNTON, NORTH CAROLINA

and is large enough to fit over any prescription glasses. Frames are available in clear, transparent green or opaque black vinyl plastic. Replaceable lenese are held in frame by a positive lock bar. Lenses of optically correct, shatterproof Methacrylate (for heavy impact) can be furnished in clear plastic or a choice of light, medium or dark green. At lower cost, acetate lenses (for light impact), also optically correct and shatterproof, are available in clear or medium green from Watchemoket Optical Co., further information being available through this journal. (Request Item No. B-27)

Gurley Permeometer

Gurley Permeometer for measuring very porous materials.

A new model Permeometer for measuring the porosity of air permeability of materials too porous to be tested accurately or conveniently with a densometer is now available from the industrial division of W. & L. E. Gurley. The Permeometer measures air flow from less than one to about 400 cubic feet of air per minute, per square foot, at a pressure drop equal to 0.5 inches of water.

The Gurley instrument has many uses in textile testing. Tests can be made very rapidly, routine tests in less than 15 seconds. The Gurley Permeometer is portable, requires no special skills to operate. The motor operates on direct current, or alternating current from 25 to 60 cycles, 115 volts.

Further details are available from W. & L. E. Gurley, through this journal, ask for Bulletin 1400.

(Request Item No. B-28)

Klosd Normal Speed Motors

Sterling Electric Motors Inc. announces the availability of the new advanced design Klosd normal speed electric motors, in frame sizes 182 and 184. These completely new, smaller motors, incorporate new National Electrical Manufacturers Association approved standards which specify more horsepower from the volume of space occupied. In accord with these requirements, Sterling engineers have designed a streamlined, compact drive which is fully protected and actually excels in performance and durability. The 182 and 184 frame sizes now in production are the beginning of a complete change-over in the Sterling line to incorporate new N.E.M.A. approved standards. The larger frames will be introduced at subsequent intervals, with all frame sizes in production by late 1955; however all current models will be available during the conversion period. (Request Item No. B-29)

Device Eliminates Pallets

A new handling device, called the Tow-Loader and just announced by Towmotor Corp., makes it possible to use thin pallet sheets in place of the conventional fork entry type pallets used in handling unit loads. Consisting of a modified Towmotor unloader accessory with a gripping device built into the pusher frame, the Tow-Loader pulls the palletized load onto either blades or forks and pushes it off at set-down points. Through the use of a Tow-Loader at both shipping and receiving ends, pallet loads can be loaded, shipped and unloaded swiftly at mimimum cost. With the Tow-Loader, the thickness of the ordinary pallet is saved and the space is completely utilized. Since the cost of the pallet sheets is small, they are left with the unit loads so that, if desired, a Tow-Loader at the receiving end can unload the carrier in record time. Once the unit loads have been placed on the pallet sheets, all further handling operations by the Tow-Loader are completely mechanical. Further information concerning this new development, can be secured through this journal. (Request Item No. B-30)

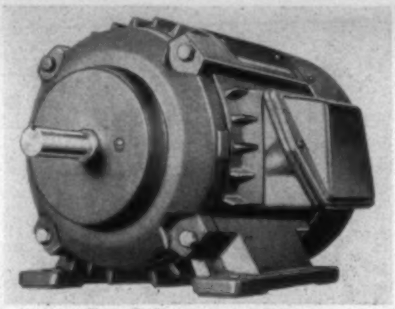
Jumbo Hydrion

The Jumbo Series of Hydrion pH test papers is announced by R. P. Cargille Laboratories Inc. This new series provides strips more than twice as wide as the regular Hydrion and the rolls are 600 inches long as compared with the regular length of 180 inches. Jumbo Hydrion is furnished in the Hydrion type of large transparent plastic dispenser and refill rolls are also packaged in transparent plastic. This Jumbo series includes ten different test papers, one (pH 1 to 11) being new and extra sensitive, and the series covers the range pH 1 to 14 with four wide range and six short range papers. (Request Item No. B-31)

Ready-Mix Concrete Patch

Jet Patch, a modified asphalt preparation with a bituminous aggregate, has transformed the repair of dangerous and costly holes in concrete floors into a speedy and simple process which permits the resumption of traffic within minutes. This product, developed by the Warren Refining and Chemical Co., provides a fast and permanent repair job with no mixing or other preparation necessary. The material, which is packed in 30 and 55-gallon drums, is simply shovelled into the hole or spalled area and tamped down. Traffic over the spot can be resumed immediately and normal passage of traffic hastens the hardening process. Jet Patch, a coarse-grained material somewhat smaller than corn grain, is ready-to-use. Its ability to feather-edge as an integral part of the floor, its speed of application, and its resistance to squeezing out, are promoted by the manufacturer. A few of the many uses of Jet Patch include covering spalled areas and building ramps, levelling around machines and worn aisles in factories, and repairing ruts and holes in concrete or macadam driveways. (Request Item No. B-32)

New Reliance A.C. Motors



New Reliance a.c. motor.

A new line of squirrel-cage induction motors was announced recently by the Reliance Electric and Engineering Co. of Cleveland, Ohio. The line, including protected and enclosed motors for all industrial purposes, is being built to recently adopted standards of the National Electrical Manufacturers Association. The first of the new Reliance motors to appear will be built for one, 1½ and two-horsepower applications, in frame sizes 182 and 184. The balance of the line, up to and including 30-horsepower, will be introduced at regular intervals during 1954 and the early part of 1955. The present Reliance a.c. line will continue to be available during this changeover period to fill the needs of those users who wish to complete current projects with motors as they are now being built. Further data on these new motors, including an informative "Compar-A-Frame Chart," is available on request to this magazine.

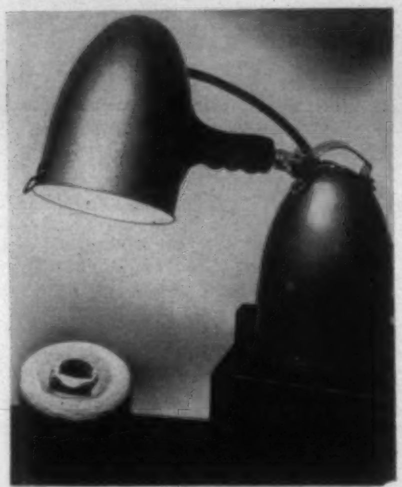
(Request Item No. B-33)

Magnet Recovery Tool

Eriez Mfg. Co. has introduced a powerful 4½-inch magnet to be used as a recovery tool for anybody who works with metal. Designed to attract and hold lost tools, parts or spilled pieces of metal from inaccessible places, the Eriez recovery magnet is of a "permanent" type . . . there is no electric current, wires, batteries, etc. It is a self-contained instrument made of powerful Alnico V and it is contained in a one-inch non-magnetic stainless steel tube.

A non-removable, mild teel tapered plug is on the attracting end of the tube to provide sinking weight while on the other end there is a captive ⅛-inch standard pipe nipple drilled with a 3/16-inch hole. The hole allows a rope or wire to be passed through it so that the whole magnet can be lowered to great lengths in vertical pipes, in water, tanks, barrels, vats, etc. A coupling or reducer can attach any length pipe to the ⅛-inch nipple and the magnet can be shoved into places where simple gravity will not carry the magnet, such as retorts, horizontal pipe, elevated nooks and crannies, etc. In steel pipes the magnetic attraction of the tool to the walls of the pipe is prevented by a feature incorporating two removable neoprene rings which slip around the recovery tube. (Request Item No. B-34)

Blak-Ray Lamps



Under black light, examination of same spool reveals differences in dyes which would show up in product.

The high cost of dyeing two batches of yarn or fabric an identical color shade has been considerably reduced by Ultra-Violet Products Inc. The company's "black lights," as its ultra violet fixtures are called, are now being used by several of the nation's leading yarn dyeing plants.

Preliminary examination of the materials under black light show up differences in shade which are indistinguishable under white light. However, these differences—if undetected prior to the dyeing operation—cause a high percentage of rejects and consequent re-runs. Considerable savings are reported by plants using Ultra-Violet's Blak-Ray lamps as they dye only yarns which appear identical in shade under the ultra violet light.

In addition to their use in the dyeing operation, Blak-Ray lamps are also being used to detect oil spots caused by journal greases, spinning oils and other staining agents. Petroleum lubricants and oils fluoresce strongly under black light, so such stains are immediately apparent under a Blak-Ray lamp. In gray, bleached or pastel shades, the spots may be examined directly under the light. If the textile has been dyed a medium or dark shade, the oil or grease should be removed by dropping ether, carbon tetrachloride or other solvent on the area and a clean piece of filter paper placed beneath the spot to absorb the dissolved oil. An examination of the paper can then be made under the lamp and compared with known lubricants used in the plant so the stain-producing oil can be identified and future accidents prevented.

Today, Blak-Ray lamps have been so improved that they are easily used under normal plant conditions and no longer require darkness or semi-darkness for effective use. Large, more efficient reflectors concentrate the light where it is required and shade the work from visible light. More intense sources of ultra violet tubes and the Alzak reflector, with spectral aluminum finish, combine in making these lights usable any place in the plant at any time. They are, of course, harmless to workers and cause no eyestrain.

These improvements in the lights have also brought about simplified methods of marking and notching. Invisible fluorescent powder, paste, chalk and crayons are used in marking materials for cutting, guide marks or patterns. These marks stand out clearly under ultra violet light, but are invisible under white light and thus eliminate any necessity of cleaning the fabric.

Exposure to light frequently causes a chemical change in textile fibers which can be detected by the fluorescence of the exposed area. Both nylon and silk, for example, are light-sensitive, and it is possible to determine the extent of light damage by examination of the fabrics under a Blak-Ray lamp. Similarly, damage to material by cleaning or washing with strong solutions can be determined by analysis under black light. Areas damaged by a strong bleach or cleaning compound show up under Blak-Ray lamps as easily discernible dark blotches.

(Request Item No. B-35)

Micro Switch Catalog

A new 12-page, two-color Catalog No. 90 on Honeywell mercury switches has just been published by Micro Switch, a division of Minneapolis-Honeywell Regulator Co. This catalog covers standard designs of Honeywell mercury switches for use in a-c or d-c industrial and commercial switching applications that provide low force and tilt motion. Catalog No. 90 covers five families of switches, classified as protected, heavy duty, general use, small and sensitive mercury switches. In all, 29 catalog listings are included. This new catalog gives complete information on each switch including dimensions, description, electrical rating, differential angle, lead wires, and the type of application that each switch is suited for. A complete section on technical data and application aids is included. Another section pictures and describes typical mercury switch applications (Request Item No. B-36)

New Warner Line

A completely new design and operating principle in small, compact, electric brakes, clutches and clutch-couplings for fast, accurate control of low-torque drives has been announced by officials of Warner Electric Brake & Clutch Co.

Smaller than a man's hand, these new replaceable face electric brakes and stationary field electric clutches are said to offer several outstanding advantages for a wide variety of power transmission applications. High-speed engagement and release, coupled with unusually high torques make the units adaptable to starting, stopping, indexing, rapid cycling, synchronizing, torque limiting, indexing and jogging and single revolution cycling applications on small, electrically operated instruments and machinery. Pushbutton or automatic operation with limit switches, relays, electric eyes, and other electric controls makes possible design opportunities heretofore limited by slow, costly mechanical linkages plus size and weight requirements.

The new brakes have just two parts, a rotating armature and a stationary field with replaceable face. Clutches and clutch-couplings have only three working parts, a stationary field, rotor and armature. All units operate on six to 15 watts of direct current.

When the clutch field coil is energized, flux flows from the field to the rotor, which attracts the armature for coupled driving. Brake flux pattern is the same except the stationary field attracts the rotating armature for instantaneous stopping. With special controls, response times measured in milliseconds are possible. Since lost motion in both the brake and clutch is practically eliminated and the actuating impulse is electrically fast, precision rotary and lineal positioning of machinery are easily obtained, according to Warner.

Voltage is easily adjusted by means of rheostats giving a wide selection of acceleration and deceleration rates. Torque build-up is always smooth until "lock in" after which engagement is positive with no creeping or slipping. Torque ratings are from eight to 240 inch pounds.

Units require from 1⅜ to 2 9/32-inch axial space for mounting. Simple design eliminates trouble spots, makes it easy to wire units into machine circuits using light-duty equipment. Brakes and clutches never need adjustment. Automatic take-up for wear of friction surfaces eliminates servicing.

Further information can be obtained by writing Warner Electric Brake & Clutch Co., in care of this journal.

(Request Item No. B-37)

Sulphur Dioxide Gas Detector

The new M.S.A. Sulphur Dioxide Gas Detector, now being announced by Mine Safety Appliances Co., is said to be an exceptionally accurate yet easy-to-use portable instrument for quickly determining SO_2 concentrations of 0 to 50 p.p.m. in the atmosphere of a working area. Maximum allowable concentration of sulphur dioxide gas for working atmospheres in 10 p.p.m. for an eight-hour exposure, according to the American Conference of Government Hygienists.

The user squeezes the aspirator bulb three times for adequate air sample, then reads the SO_2 concentration on a graduated scale on the detector tube. The reagent in the tester tube turns from blue to white, and the length of decolorization is directly proportional to the per cent of SO_2 in the sample. Details on the detector are available upon request to this publication.

(Request Item No. B-38)

Ceramic Colors Developed

A new line of opaque metallic colors has been developed by the Metlon Corp. These shades, which are called Ceramic colors, have an entirely new look, adding a subtle tone to the metallic glitter. They are comparable to the metallic yarns formerly made in France and Switzerland. The Ceramic colors will add surface interest to all types of woven fabrics, and it is expected they will be particularly important in millinery and accessories of all kinds. The Ceramic line is being offered in all the Metlon yarn widths. Like the other metallic yarns manufactured by the company, they may be washed and dry cleaned.

(Request Item No. B-39)

Aquadag

Aluminum-base electric lamps subjected to the chemical fumes found in many textile wet-finishing plants are likely to stick so tightly in their sockets that it is almost impossible to remove them without breakage. Aquadag, a dispersion of colloidal graphite in water, coated on the base threads of aluminum-base lamps prevents this seizure which results primarily from the high reactivity of aluminum. The lubricating quality of the colloidal graphite reduces static friction, corrosion or galling between base and socket so that bulbs can be unscrewed easily. Aquadag is readily adsorbed on metal surfaces, is a good conductor of electricity and has a negligible coefficient of expansion.

The practical value of this application is emphasized by the wartime use of Aquadag brushed neat on adapters for aluminum tubing used on oxygen supply systems in aircraft. Here, any damaged sections of the oxygen tubing had to be quickly and easily replaced in flight since any sticking might have cost lives.

Aquadag is a product of Acheson Colloids Co., division of Acheson Industries Inc.

(Request Item No. B-40)

Vacuum Pump Care Handbook

Dozens of practical tips on installing operating and maintaining vacuum pumps and vacuum systems are contained in "How to Care for Your Vacuum Pump," a new 16-page handbook just issued by F. J. Stokes Machine Co. The manual, intended for all who install, operate and service vacuum pumping equipment contains such helpful hints as: the proper way to make leakproof connections in vacuum piping layouts; recommended types of gauges, valves, fittings and gaskets; step-by-step troubleshooting procedures to be followed when the pump is knocking, will not start, or will not produce a satisfactory vacuum; some 25 "do's" and "don'ts" to insure long and trouble-free service life of vacuum systems. Copies are available free on request by addressing this publication.

(Request Item No. B-41)

Monroe Floor Booklet

A 20-page booklet describing the importance of good floors in industrial, institutional and public buildings is announced by the Monroe Co. Inc. The result of many years of Monroe research in flooring problems, the new brochure explains the differences between floor requirements for various industries. While some floors must withstand heavy trucking, chemicals, etc., other floor must be resilient, attractive and non-skid.

The booklet lists Monroe floor resurfacing and repair products, describes outstanding qualities of each material, and recommends the uses to which each should be applied. It contains a sample of floor analysis form which assists maintenance superintendents in determining their floor requirements. Methods of application of each product are also described.

The brochure is completely illustrated with photographs, including many "before" and "after" shots of floors repaired or resurfaced with Monroe products. Write for "Floors," form No. 168-11, Monroe Co. Inc., care of this publication.

(Request Item No. B-42)

Double-Coated Tape

A new double-coated tape for industrial use—for jobs requiring a tape that's sticky on both sides has been announced by Minnesota Mining and Mfg. Co., St. Paul, Minn. The tape, Scotch brand double-coated tissue tape No. 400, features the following: (1) A new protective liner (tan rather than gray) is used to minimize loss of tackiness during storage; (2) liner removal has been made easier; and (3) the tape, minus the liner, is nearly one mil thinner than the original tape. The tape is designed for such jobs as mounting metal to metal, or metal to wood (such as cuts to wood blocks in the printing trade), or for a number of splicing jobs involving paper, cloth, and metal foils. The two-sided tape also sticks at a touch for such industrial tasks as holding patterns to many layers of cloth for multiple, large scale cutting. The tape is being made available nationally in one-fourth to 20-inch widths on 36-yard rolls from paper jobbers, industrial supply distributors, graphic arts supply houses and stationers. (Request Item No. B-43)

Temperature Controller

High sensitivity, long-term stability, reliability and low cost are featured in a new two-zone electronic temperature controller announced by the Fielden Instrument Division, Roberstshaw-Fulton Controls Co. The new unit is designed for a wide range of industrial applications in all industry where accurate temperature control is required. Because of its high sensitivity, the company said the controller is also suitable for use in laboratory work.

The Series 97 electronic temperature controller uses a resistance temperature detector element as a sensing device in a bridge circuit in conjunction with a high gain phase sensitive amplifier relay unit. Sensitivity is 0.1° F. on all ranges. Only two vacuum tubes are employed and the unit is encased in a strong aluminum housing 6½ by 7½ by four inches deep. Further information is available on request.

(Request Item No. B-44)

Pennsalt Furan Cement

Combining for the first time greater chemical resisting properties, superior physical strength and economy with the stabiltiy and non-toxic qualities of ordinary furfuryl alcohol cements, the corrosion engineering products department of Pennsalt Chemicals announces a new and exclusive all-purpose product under the trade name of Pennsalt Furan cement. This new furfuryl-ketone resin development, highly resistant to acids, alkalines, and most solvents, is now available in two formulations. Powder S, a siliceous filler, is resistant to acids, except hydrofluoric, solvents, oil, grease, water, steam and mild alkalies. Powder C is a carbon type filler, an effective resistant for broad acid and alkali protection including hydrofluoric acid. Both powders are easily worked and may be handled safely.

(Request Item No. B-45)

Evaluating Apprentices

What does it cost to train apprentices? To what extent do they pay for their training by the work they accomplish during their apprenticeship? What is their potential value as journeymen after completing their training? How to figure out the answers to these questions and how to determine the progress and ability of apprentices during their training are explained in a 24-page pamphlet entitled "Evaluating Apprentices" issued by the Bureau of Apprenticeship, U. S. Department of Labor.

Set forth in the pamphlet is an accounting system itemizing more than 50 cost and profit items involved in apprentice training; and also a series of forms for recording the hours and grade ratings of apprentices as they progress step-by-step during their training, as well as summary forms for annual and final records.

The booklet is designed primarily for the use of training directors, members of joint apprenticeship committees and others responsible for training who wish to determine as exactly as possible the cost of training and the progress of apprentices.

Copies of this booklet may be obtained free of charge by communicating with the Publications Branch of the Bureau of Apprenticeship, U. S. Department of Labor, Washington 25, D. C. When requesting copies, please mention this publication in

(Request Item No. B-46)

Fork Truck Pusher Attachment

A newly-designed hydraulic pusher device for use on hydraulically-actuated fork trucks has been developed by Elwell-Parker Electric Co. The attachment provides a means for mechanically pushing a load off a truck's forks and is designed principally for handling loads without pallets. The attachment does not reduce the capacity of a truck. The pusher unit consists of a vertical load screen guided by a pair of pantographs, one on each side. Power to extend and retract the screen is supplied by a telescoping double-acting hydraulic cylinder acting through specially located thrust arms. The use of this type of cylinder gives more stroke with less over-all height which permits tiering in low overhead areas.

The mechanism for the pusher is mounted alongside the truck's uprights so that the possibility of damage during travel is minimazed. The screen itself can be made from bar, screen wire of any mesh, pipe, etc., according to specific requirements. Further information may be obtained from Elwell-Parker through this journal.

(Request Item No. B-47)

Serving The Textile Industry

Talcott Observes Centennial

James Talcott

James Talcott Inc., one of New York's and the nation's leading financial organizations, on Feb. 8 celebrated the 100th anniversary of the firm's founding. Talcott, a prominent name in the fields of factoring and commercial financing, has long been identified with growth and progress in the textile industry. The firm is unusual in that a Talcott has always headed the organization. The present president, James Talcott, is a grandson and namesake of the founder and represents the third generation of Talcotts to be chief executive officer.

James Talcott stated at the anniversary ceremonies, "In our 100 years, we have served many hundred businesses and industries. James Talcott has aided clients through panics and depressions. During the great depression of the 1930s for example, a factor's advice and financial aid were often the difference between the success or failure of a business. In short, our achievements are in part a reflection of the success of our clients."

In February 1854, when founder Talcott started business as selling agent for his brother's knitting mill, New York was a city of 500,000 people. It was, however, the banking center of the country and the headquarters for the distribution of textiles within the United States. Talcott's ability to sell soon gained him recognition as a commission merchant and as a specialist in handling the merchandise of woolen mills.

Due to the difficulties of transportation in America of that age, it was necessary that the mills, located for the most part in rural areas far distant from New York City, store the merchandise with commission merchants within the city limits. From a period soon after the Civil War until the close of the 19th Century, the commission merchant, or factor as he was becoming to be known, handled all of the problems involved in the selling and handling of goods from the time it came from the looms.

With an expanding economy, the demand for textile goods rapidly grew and there arose the need on the part of the mills for financing. At this point the commission merchants were called upon to make advances against merchandise stored in their warehouses. As the mills moved into the manufacturing of two types of goods to meet seasonal demands, advances on merchandise did not provide enough funds to finance mill operations. The factors thereupon started a practice most prevalent today of cashing the accounts receivable.

During this development period of old line factoring as we know it today, James Talcott had retained the services of Charles Evans Hughes. While working in behalf of James Talcott, Mr. Hughes was greatly responsible for codifying and simplifying factoring laws so that it became a workable instrument beneficial to both client and factor.

The rapid growth of Talcott's business necessitated movement from his original place of business at 54 Liberty Street to 13 Barclay Street in 1858, to 165 Church Street in 1864 and finally to 108-10 Franklin Street in 1868 where he remained for more than 40 years until moving to the present location of 225 Fourth Avenue in 1911.

By 1904, there was a definite turning point in the function performed by Talcott and other factors. They had ceased for the most part to act as selling agents and were confining their activities more to the financing problems involved in the manufacture and distribution of textiles.

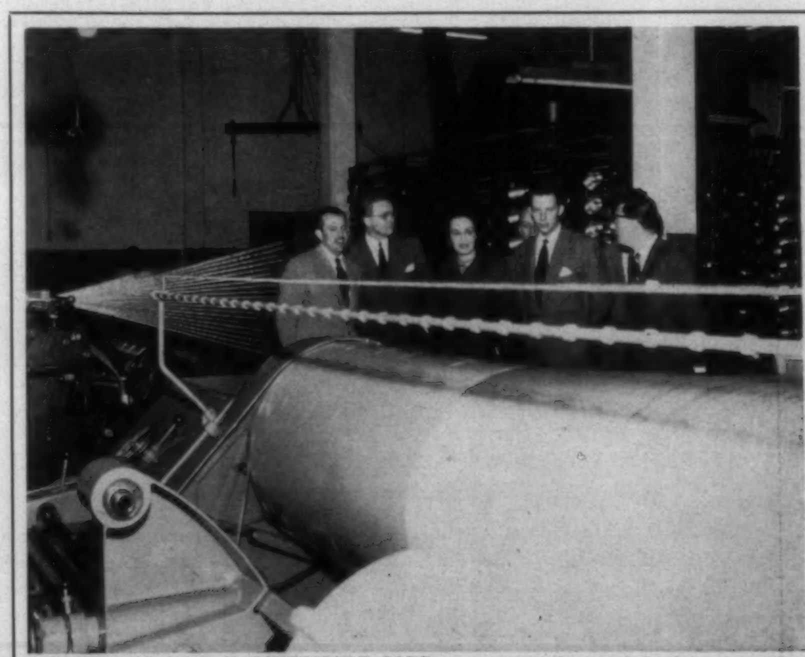
It was during the depression years of the '30s the factor probably rendered its greatest service in modern history to his clients. The credit problems created by these turbulent times were much to great for the average textile house to handle. The experience and strong capital position of firms like James Talcott Inc. was often the difference between success and failure for the client.

Until 1936, James Talcott Inc. had been a family-owned corporation but in that year common stock was sold and this stock is currently traded on the New York Stock Exchange. During the '30s Talcott not only expanded by the acquisition of new clients but also by the direct purchase of other factoring firms.

From a modest beginning in 1854, Talcott's has grown to be an intergrated organization employing over 300 people including one of the largest staffs of credit specialists and analysts in the country. Offices are in New York and Chicago; regional representatives in Atlanta and Charlotte.

Courtaulds Lab Completed

Courtaulds (Alabama) Inc. is preparing for the opening of its research laboratory,



DIRECTORS OF H. F. LIVERMORE CORP., on a tour of one of the largest textile mills in Mexico, are shown about by Guillermo Marti *(left)*, manager. The occasion was a trip to Mexico City recently by the firm's directors to study the expanding textile industry in Mexico as a major export market for HFL improved loom parts. Others pictured are *(second from left)* Chester Hammond, Livermore president; Mrs. Carolyn Duval, a director; F. W. Von Son, Livermore sales agent in Mexico; and Jose de la Vina, assistant manager of the mill.

For the past four years the shipment of looms and loom parts to Mexico from this country is estimated at $2,549,000, making it the third largest purchaser in Latin America, with Brazil and Colombia first and second. Mexican purchases for 1952 were estimated at $811,000 against $685,000 for 1951. Mr. Hammond said that the weaving of cotton fabrics is now believed to be the largest single industry in Mexico and uses about 25,000 looms. Most of these are old-type British machines which are beginning to wear out and need replacement. The results obtained with U. S. looms have been good, he said, and there is every indication that Mexican cotton mills will turn largely to the U. S. when they make their purchases.

located approximately 20 miles north of Mobile, Ala., about March 1. John Wharton, research director, and prospective staff members, have been making special studies at Courtaulds' plants in England before opening the new Alabama facility. The laboratory was completed this month and the adjoining pilot plant is expected to be completed in August.

The laboratory and pilot plant represent an investment of about $500,000 and are additions to Courtaulds' big rayon plant, which cost an estimated $10,000,000. Its capacity is 50,000,000 pounds of rayon staple annually.

Pittsburgh Coke Plans Spartanburg Development

Pittsburgh Coke & Chemical Co. and the Spartanburg (S. C.) County Planning and Development Commission recently announced the company's plans for a long-range industrial development program near Spartanburg.

W. Kenneth Menke, vice-president of Pittsburgh Coke said the company will manufacture chemicals at a 150-acre site, which will become Southern headquarters and national sales offices for its fine chemicals division.

Construction will get under way in the near future on a $100,000 laboratory, office and warehouse on the plant site, located five miles west of Spartanburg on U. S. Highway 176. Pittsburgh Coke's fine chemicals division maintains warehouse and sales facilities in Pittsburgh, Providence, R. I., and Charlotte, N. C.

Pittsburgh Coke's fine chemicals division manufactures vat dyestuffs for textile and allied industries at its main plant in Pittsburgh.

Mr. Menke said Spartanburg was selected as the company's new Southern headquarters largely because of the area's natural advantages, including its excellent marketing location, transportation facilities and availability of utility services.

Richard M. Locke, sales manager of the fine chemicals division, will be in charge of the Spartanburg facilities, Mr. Menke said.

Riechhold, Affiliate Merge

Watson-Park Co. of Ballardvale, Mass., merged completely Feb. 1 with Reichhold Chemicals Inc., according to an announcement by Henry H. Reichhold, chairman of the board. Watson-Park has been an affiliate of Reichhold since 1952. The merger results in the complete absorption of the company by Reichhold and hereafter Watson-Park's Ballardvale plant will be the headquarters of Reichhol's New England Division. The new move, including stock purchases, installation of new equipment and expansion, involves about $1,000,000, Mr. Reichhold said.

The Ballardvale plant now produces resins for the paper industry, formaldehyde, and textile resins and chemicals. Acquisition of the Ballardvale plant is in fulfillment of the Reichhold policy of manufacturing and shipping its products from centrally located sites near its customers. The Ballardvale plant thus enables Reichhold to extend this policy to customers in New England.

Ralph T. Urich will be general manager of Reichhold's New England Division with headquarters at Ballardvale, while H. F. Shepard, formerly president of Watson-Park, will continue with the company in an executive capacity.

Brush Electronics Opens Greenville, S. C., Office

Brush Electronics Co. of Cleveland, Ohio, manufacturer of industrial and research instruments, announces the establishment of a Brush Southeastern textile instrument sales and service office at 91 Cleveland Street, Greenville, S. C. This new office, which will be under the direction of D. M. Gaskill, supervisor, textile section, will provide Brush's present and future customers, with the best possible textile engineering and service.

Mr. Gaskill received his textile engineering degree from the Rhode Island School of Design and prior to joining the Brush organization was affiliated with the Warner & Swasey Co. in the textile sales division. His association with these companies has enabled him to gain a sound understanding of problems peculiar to the textile industry.

It is expected that routine service concerning the Brush uniformity analyzer will be expedited by means of this new facility, and Brush customers will also benefit from continued close contact with company-trained field service engineers. These service engineers have had many years experience servicing electronic equipment and have been thoroughly trained by Brush in the operation and maintenance of the uniformity analyzer.

A complete stock of spare and operating supplies will be available at the Southeastern textile instrument office. The establishment of this office for textile equipment follows Brush's policy in offering the best in engineering and service to users of its products.

New Branch Opened

A group of executives of General Aniline & Film Corp. and General Dyestuff Corp. traveled to Chattanooga, Tenn., Jan. 29 where they participated in the formal opening of a new branch building erected to service the expanding dye and chemical business in the area. The new building houses office, warehouse and laboratory facilities for General Dyestuff Corp. and Antara Chemicals, sales divisions of General

THE NEW MOTOR LINE OF LOUIS ALLIS CO. was introduced to industrial representatives during a dinner held at Charlotte, N. C., last month. Shown are Robert Overstreet *(left)*, district sales manager for Louis Allis at Charlotte, and M. F. Aynes, assistant national sales manager from Milwaukee, Wis.

Aniline. The building is air-conditioned throughout and is electrically heated. Warehouse space covers about 17,500 square feet.

The G.A.F.-G.D.C. executives, headed by Senior Vice-President John H. Hilldring and Sumner H. Williams, vice-president and general sales manager, joined with more than 100 customers in an inspection tour of the building. An informal dinner followed the plant visit at Lookout Mountain Fairyland Club.

Host was H. A. Webb, whose appointment as branch manager was announced by Mr. Williams coincident with the opening of the new building. Mr. Webb first joined General Dyestuff Corp. in 1935 as a laboratory assistant at the Charlotte, N. C., branch, focal point of operations in the huge Southern textile market. He has been a salesman for many years now and is widely known in the territory. Appointed with Mr. Webb, as office manager, was W. R. Criminger, who had been employed at the Charlotte branch since 1940.

Besides Tennessee, the new office will service Alabama, Arkansas, Louisiana, Mississippi, Texas and parts of Florida, Georgia and Virginia.

Open Charlotte Office

Thomas D. Toy & Co. recently opened an office in the Johnston Building, Charlotte, N. C., in association with H. Gordon Kenna Jr., it is announced by Horace Toy, managing partner. The company represents specialty cotton yarn mills, selling to the weaving and knitting trades.

Reorganization Completed

The board of directors of Industrial Ovens Inc. has announced that the reorganization of Industrial Ovens has been completed in accordance with plans undertaken a year ago. Personnel changes of the reorganized corporation include the following: Howard R. Richards has been elected president and general manager; Sloane E. Allen is vice-president and treasurer; Louis A. Litzler, secretary. E. W. Baumgardner has been appointed sales manager and A. V. Alexeff, chief engineer.

Industrial Ovens Inc., 13825 Triskett Road, Cleveland, Ohio, designs, manufactures and installs continuous materials handling and processing systems, generally involving the engineered application of heat, for the textile and other industries.

New Fibers Laboratory

A new laboratory building specially designed for the pioneering study of synthetic fibers has been completed by Carbide and Carbon Chemicals Co., a division of Union Carbide, Dynel producer, at its research center in South Charleston, W. Va., according to C. A. Setterstrom, general manager of Carbide's textile fibers department. Equipment has been installed and full operation of the laboratories has just been attained, Mr. Setterstrom said.

The laboratories are equipped with facilities for the preparation and evaluation of films of experimental resins; the small scale preparation of fibers by wet-spinning, dry-spinning and melt-extrusion; detailed studies of such operations as stretching, annealing, drying, cutting; evaluation of fibers in knitted and woven fabrics; basic research on dyeing, and systematic studies of the fundamental properties of fibers. The facilities include air-conditioning equipment capable of providing controlled temperatures and humidities over an unusually wide range.

Baxter Expands Grover Unit

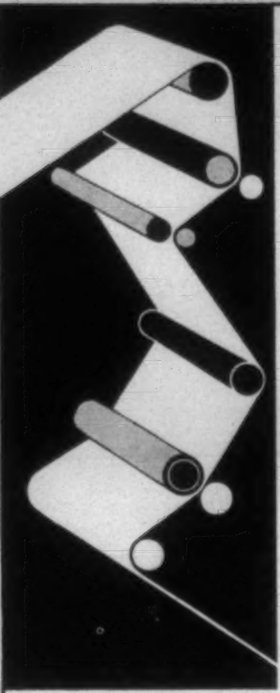
Baxter Paper Corp. of Paterson, N. J., recently purchased the equipment and good will (but not the name) of Southern Wood Specialty Co. and plans to move the equipment to its Grover, N. C., plant for the production of comber boards and comber board slips for the jacquard weaving industry. The Grover plant will be expanded to house the additional equipment. Baxter will now be able to do the entire job of jacquard harness building in its own plant and under its own control.

Gossett Named Agent

Ralph Gossett & Co., Greenville, S. C., has been appointed exclusive Southern agent for the sale of shell rolls, Tensionhold temple rolls, warper beams and other textile items manufactured by Washburn, New Bedford, Mass.

HART PRODUCTS CORP. recently completed the installation of new equipment costing $50,000 in its plant and laboratory at Jersey City, N. J. Newly installed are electrostatic measurement devices, laboratory colloid mills, gas fading equipment, an ultrasonic homogenizer, wrinkle testers, a hydrostatic absorption meter and various pilot plant equipment. In addition to performing basic industrial research, the laboratory is now conducting special experiments in the areas of anti-static agents, permanent water repellents, organic sequestering agents and ethylene oxide condensates.

In the picture *below*, members of Hart's technical sales staff are shown attending a recent technical and sales symposium at the new laboratory. Officials of the company and guest speakers from other organizations participated and led the documentation and discussion of a number of technical subjects pertaining to textile manufacturing.



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MANUFACTURING CHEMISTS FOR THE TEXTILE INDUSTRY

1953 Man-Made Fiber Output Shows Increase

Man-made fibers produced in the United States during 1953 totaled 1,497,000,000 pounds, an increase of seven per cent over 1952, but slightly under the record output of 1951, according to the *Textile Organon*, statistical bulletin of the Textile Economics Bureau Inc. Viscose+cupra rayon output was up 8½ per cent during the year but acetate was down three per cent. The non-cellulosic fibers, however, showed a 14 per cent gain to reach a new record despite a sharp deline in staple+tow production in the last half of the year.

The *Organon* in a preliminary computation of world rayon and acetate fiber output estimates that the total during 1953 was 4,090,000,000 pounds, a new record, exceeding by 1½ per cent the production in 1951, the previous record year.

The 1953 United States production of rayon and acetate amounted to 1,196,900,000 pounds, an increase of five per cent over 1952 but eight per cent under 1951 and five per cent under 1950. Compared with 1952, the branches of the rayon and acetate industry that did not increase their output in 1953 were acetate yarn and staple+tow. The largest poundage gain was made in viscose high tenacity yarn, which showed a ten per cent increase over 1952. Regular+intermediate tenactiy rayon yarn was up 12 per cent and rayon staple+tow was up three per cent.

The *Organon* noted that shipments generally lagged behind production during the year with the result that producers' stocks at the year end were slightly higher in all categories except regular+intermediate tenacity rayon yarn, where they were slightly lower. The increase in stock ranged from 3,300,000 pounds for acetate staple+tow up to 12,100,000 pounds for rayon staple+tow.

Total rayon and acetate shipments in 1953 amounting to 1,168,700,000 pounds were close to the 1952 figure on shipments, which was 1,160,500,000 pounds. They were eight per cent lower, however, than the peak shipment figure of 1,268,500,000 pounds in 1950.

A preliminary estimate of 1953 imports, tabulated by the *Organon* to determine total supply, shows that they represent six per cent of total supply, a percentage figure similar to that of 1952 but two percentage points less than in 1951.

The non-cellulosic production figure last year, according to the *Organon*, was 300,500,000 pounds of which filament yarn+monofilament production was 245,300,000 pounds and staple+tow production 55,200,000 pounds, each representing an increase of 14 per cent over the previous year. The non-cellulosic fibers included are acrylic fiber, nylon, polyester fiber, polyethylene fiber, polyvinyl-acetate fiber, protein fiber, saran, and textile glass fiber.

In computing the world total of rayon and acetate production, the *Organon* estimates that rayon+acetate filament yarn output in all countries last year amounted to 2,040,000,000 pounds, an increase of 11 per cent over 1952, but still below the 1951 record of 2,123,000,000 pounds. However, if the staple+tow figure reaches the 2,050,000,000 pounds now estmiated, it will set a new high mark, exceeding 1952 by 17 per cent and 1951 by 7½ per cent.

The decline in filament yarn output in the United States in the last four months of 1953 was not reflected in other countries, with the possible exception of France and Italy. Several large producing nations such as Western Germany, the United Kingdom and Japan showed higher output in the late months of 1953 than they did earlier in the year. However, it is anticipated that practically all countries will show a larger filament yarn output in 1953 than 1952, with the largest gains probably occurring in the United States, the United Kingdom, Italy and Japan. Most of these increases can be assumed to be attributable, according to the *Organon*, to gains in viscose high tenacity yarn output.

In the staple+tow category, the *Organon* states that sharp increases are indicated in the United Kingdom, where there is a possibility that the 1953 output will be up 50 per cent over a year ago. In Japan an increase of about 35 per cent in staple+tow makes that country the world's largest producer. Other significant increases occurred in Western Germany, Italy, France, and Belgium. By contrast, staple+tow output in the United States was up only one per cent compared to 1952. In Austria and Spain the staple output was apparently down compared to 1952.

Analysis of United States production of rayon and acetate filament yarn and staple indicates that the output of high tenacity viscose rayon was 453,300,000 pounds, up ten per cent over 1952. Production in 1953 and comparisons with the previous year for other categories were as follows: regular+intermediate tenacity rayon yarn 204,300,000 pounds, up 12 per cent; acetate yarn 234,300,000 pounds, down two per cent; total rayon+acetate filament yarn 886,900,000 pounds, up seven per cent.

Total rayon staple+tow output in 1953 was 219,100,000 pounds, an increase of 3½ per cent over 1952. Acetate staple+tow production last year totaled 90,900,000 pounds, a lost of 4½ per cent. Total staple+tow production (rayon+acetate) amounted to 310,000,000 pounds, or one per cent over 1952.

Production changes last year, the *Organon* notes, were less drastic than in 1952. Viscose high tenacity yarn, for instance, showed only a ten per cent gain over the previous year compared to a 24 per cent rise in 1952 over ductive facilities for viscose high tenacity has been under 1951. The *Organon* points out that the expansion of pro- way for several years and is expected to be completed by the middle of 1954, at which time the total annual capacity should reach 520,000,000 pounds. The *Organon* explains that the declining production rate of high tenacity viscose rayon yarn in the second half of 1953 is associated with the fact that this yarn, having virtually taken over the tire market, was more vulnerable to seasonal fluctuations in demand than when it had shared the market with cotton.

Output of regular+intermediate tenacity rayon yarn, which fell drastically in 1952, recovered somewhat in 1953, but apart from 1952, the 1953 output was the lowest in 15 years. Production of acetate filament yarn last year was slightly less than 1952 but substantially lower than either 1950 or 1951.

The average denier of viscose high tenacity produced last year was 1,582 compared with 1,585 in 1952, but

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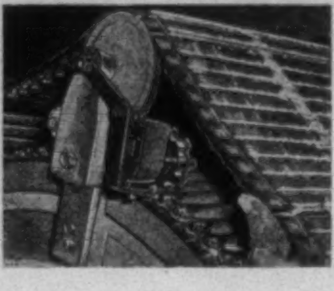

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substantially higher than the average deniers produced in any previous year. The average denier of regular+intermediate tenacity yarn produced in 1953 was slightly under 1952 but far ahead of earlier years. In the acetate picture, the 150, 75 and 100-denier yarns continue to dominate acetate production in that order, as they have for many years.

The small increase in yarn shipments last year, according to the *Organon*, was the combined result of a nine per cent rise in shipments to the tires, hose and belting and related uses trade and a 3½ per cent decline in yarn to the textile trades. The 439,400,000 pounds shipped for tires and related uses was a new high, made despite a marked slowdown in the last half of 1953. On the other hand, sales of so-called "textile" yarn dropped for the third consecutive year and the 1953 figure was the lowest since 1945.

Except for broad woven and warp knitgoods, the use of rayon continues to be larger than acetate in all the textile trades, according to the *Organon*. In the broad woven goods category, the rayon share was 44 per cent of total filament yarn shipped in 1953 compared with 39 per cent in 1952. The rayon shares of the warp knit total were 19½ per cent and 19 per cent in 1953 and 1952, respectively.

Staple shipments to domestic users last year were down 11½ per cent compared to 1952. However, shipments to carpet and rug manufacturers increased notably. Shipments to woolen and worsted spinners showed no significant change and the cotton spinning system continues to account for the great bulk of staple.

Georgia Operating Executives To Meet May 8

Carding and spinning problems will be the topic for discussions at the Spring meeting of the Textile Operating Executives of Georgia, to be held Saturday, May 8, at the Georgia Institute of Technology, beginning at 9 a. m.

Members of the group have been sent a questionnaire from which a booklet will be prepared for distribution at the Spring meeting.

Officers of the Textile Operating Executives of Georgia are: Turner R. Scott of Silvertown, Ga., general chairman; E. A. Bentley of Columbus, Ga., vice general chairman; and Herman A. Dickert of the A. French Textile School, Georgia Tech, secretary and treasurer.

A.S.Q.C. Planning Garment Task Group

Plans for the setting up of a garment manufacturing task group and a series of technical papers highlighted the fourth annual conference of the textile division of the American Society for Quality Control held Feb. 5-6 at the North Carolina State College School of Textiles in Raleigh. Attended by over 200 members, the conference also included panel and group discussions, task group meetings and educational seminars in quality control statistics and methods.

The Friday morning session was presided over by Gardner Hailes, chairman of the textile division of the A.S.Q.C. and director of quality control at Avondale Mills. After a short welcome speech delivered by Dean Malcolm Campbell of the School of Textiles, the technical papers session proceeded with a paper entitled "Control in Fiber Blending" by Geoffrey V. Lund, manager, experimental unit, Courtaulds Ltd., Arrow Mill, Rochdale, England. Mr. Lund emphasized the need for closely controlled blending of fibers, both natural and man-made, to most efficiently utilize those fiber characteristics that will produce the best desired fabric. "An Evaluation Program for New Textile Equipment" was called for by R. C. Tanner, director of quality control, Fieldcrest Mills, who stressed the desirability of actual mill installation and testing of new types of equipment before definite purchases are made. According to Mr. Tanner there must be a planned continuing program of machine replacement in any mill organization that intends to remain in an advantageous competitive position in the textile industry.

W. A. Julian, cotton buyer for Burlington Mills Corp. at Cramerton, N. C., presented a paper on "The Use of Fiber Testing in Cotton Purchasing" at the afternoon session which was presided over by D. S. Hamby of the School of Textiles and treasurer of the textile division of the A.S.Q.C. This was followed by a panel discussion on "Evenness Testing," moderated by E. B. Grover of the School of Textiles and conducted by George Archer of the Uster Corp., Norbert Enrick and William Waters from the Institute of Textile Technology, and John Derst of Coats & Clark Inc. The panel dealt with defiinitions, descriptions, machines and methods used in determining and evaluating evenness as applied to textile processing.

The Saturday session consisted of additional technical papers, task group meetings and quality control educational seminars of both an elementary and advanced nature. Robert Jones delivered an illustrated lecture on the importance of developing "quality mindedness" in all persons throughout a mill organization. Mr. Jones, who is the quality control superintendent of the Bigelow-Sanford Carpet Co., instituted a novel conference device, the "buzz session," whereby groups in the audience were given specific quality control problems to consider and solve. These solutions, after presentation, were critiqued and discussed by the lecturer and others attending the session. What the vast automotive field desires from the textile industry was outlined by John Nagy of the manufacturing staff of the Ford Motor Co. in his talk entitled "Textile Quality Requirements of the Automobile Industry."

A film strip relating to defects in staple fiber mills and the establishment of plans for a new garment manufacturing task group were specific outcomes of the various Saturday task group meetings. The need for closer co-ordination between the garment industry and the textile mills was realized and a means for this co-ordination through a new task group was discussed by A.S.Q.C. textile division members and representatives of the technical committee of the Southern Garment Manufacturers Association. A special task group for the planning of a film strip on the subject of methods of correcting staple fiber mill defects was formed under the leadership of Edward Rudnick of Wamsutta Mills who stated that the film would be shown to those mills that desired it with first calls reserved for members of the task group.

The elementary education session, under Chairman Robert Carson of the Clemson School of Textiles, featured papers by D. S. Hamby, Dr. James Barnes, assistant director of research at Kendall Mills, F. H. Martin, director of research at Springs Cotton Mills, and Tom Bainbridge of the Tennessee Eastman Corp. on the elementary aspects of quality

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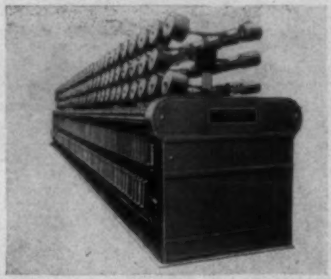

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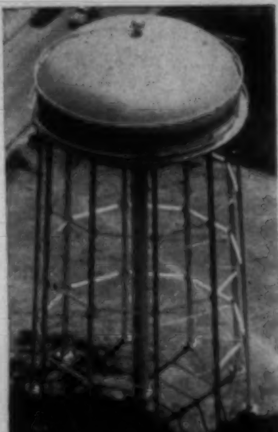

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control; this was followed by a panel conducted by the chairman and speakers. John C. Reynolds, secretary of the textile division, A.S.Q.C., and from the Celanese Corp. of America, presided over the advanced educational seminar held on Saturday afternoon at which Dr. C. West Churchman, director, operations research group, Case Institute of Technology, delivered a talk on "Operations Research." The discussions were concluded by Drs. Robert Hader and J. J. Moder of the Institute of Statistics at North Carolina State and the Industrial Engineering Department at Georgia Institute of Technology, respectively, who spoke jointly on the subject of "New Developments in Statistical Techniques."

Glycerine Association Honors Researchers

Albert C. Nuessle of Rohm & Haas Co. and Russell F. Crawford Jr., formerly with Rohm & Haas and now with American Viscose Corp., recently were honored by the Glycerine Producers Association by being named as co-winners of third place honors in the 1953 Glycerine Research Awards. These awards are given each year by the association in recognition of new and independent research contributing to knowledge and use of glycerine (also called glycerol).

Mr. Nuessle and Mr. Crawford found that polyacrylic acid reacts with the surface molecules of nylon to impart a crisp finish, and that after the material is heat-set (at 400° F.), the finish is unaffected by washing. However, because of unreacted carboxyls of the polyacrylic acid (PAA), a means of avoiding excess acidity is required, and this cannot be done by neutralization prior to application without lowering durability.

A co-reactant is needed during the cure. Various polyhydric alcohols and amides were tested. When PAA plus glycerine, on a weight basis of ten parts to three, was cured onto nylon, results were most effective from the standpoint of crispness, durability and freedom from discoloration.

During the course of the work, it was also determined that glycerine alone, in high concentration with severe curing, acts to stiffen the nylon, although this was not found to have the commercial practicality of the PAA-glycerine combination. In the latter case, the glycerine appears to act as a flux to facilitate penetration and reactivity of the acid, as well as co-reacting with the acid to enhance the durability of the finish.

This opens the way to a commercial method of imparting a crisp washfast finish to nylon fabrics, particularly nylon lace. Other finishes for nylon lace have not been as durable to washing.

Mr. Nuessle is a graduate of the University of Pennsylvania, from which he received a B.S. degree in chemistry in 1936. His professional career includes ten years with Jos. Bancroft Sons Co., Wilmington, Del., textile processor. Five of these years were spent as research chemist, five as production supervisor. He has been with Rohm & Haas Co. since 1947, and now heads its textile applications laboratory.

Mr. Crawford, who was employed by the Rohm & Haas Co. when he did the work for which he was honored along with Mr. Nuessle, is now in the textile research department of the American Viscose Corp. He is assistant to the head of the textile chemicals division of this department;

Mr. Crawford received his technical training at Kings College, New Castle, Del., from which he received a B.S. degree in chemistry in 1942.

Latest Edition Of A.S.T.M. Book Available

The American Society for Testing Materials announces availability of the latest edition of *A.S.T.M. Standards on Textile Materials (With Related Information)*. This 1953 compilation brings together in compact, readily usable form, the A.S.T.M. specifications, test methods and tolerances widely used in this field.

Prepared by A.S.T.M. Committee D-13 on textile materials, this edition gives in their latest form 105 A.S.T.M. standards, including 80 test methods; 17 specifications; two definitions of terms relating to textile materials; three tolerances for filament yarns (acetate, nylon and rayon); three recommended practices: one for interlaboratory testing of textile materials, another for designation of linear density of fibers, yarns and other textile materials in universal units—and one for designation of yarn construction; and other material.

Groups of standards in this compilation cover: asbestos, bast and leaf fibers, cotton, glass textiles, rayon, acetate and silk, wool, pile fabrics (carpets), felt; and general fibers, fabrics, yarns, threads and cordage. Also identification, qualitative and quantitative analysis; and resistance to insect pests and micro-organisms. General test methods cover testing machines, humidity and interlaboratory testing.

New tentative methods of test are included for: average fiber diameter of wool tops by porous plug tester; alkali-solubility of wool; relaxation and felting shrinkage in laundering of stabilized knit wool fabrics; tensile strength of wool fiber bundles; yarns containing wool; recovery of textile fabrics from creasing, using the vertical strip apparatus; maturity of cotton fibers (random sample-sodium hydroxide swelling method); cross-sectional characteristics of cotton fibers; strength of cotton fibers (flat bundle method); number of neps in cotton fibers.

New appendices cover, in addition to report of Committee D-13 on textile materials, proposed methods of test for: identification of finishes on textiles; and recovery of textile fabrics from creasing using the roller pressure apparatus; another item covers recommendations for the establishment of standard moisture content for wool and its products.

A convenient table of contents is included (by subject and A.S.T.M. serial designation) and an extensive index. Copies of this 696-page book can be obtained from headquarters of the American Society for Testing Materials, 1916 Race Street, Philadelphia 3, Pa., at $5.25 each, heavy paper cover.

Heard Outlines Best Uses Of Engineering

The many ways in which the textile industry can make profitable use of trained engineers were outlined by M. Earl Heard, vice-president in charge of research at West Point (Ga.) Mfg. Co., before the Feb. 5 meeting of the Southern textile division of the American Society of Mechanical Engineers, held at the Georgia Institute of Technology, Atlanta. Mr. Heard was the luncheon speaker at the event.

Besides Mr. Heard, other speakers included Esmond J.

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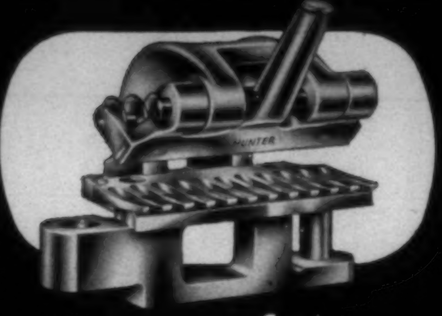

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Keating of the cotton chemical finishings division, U. S. Department of Agriculture, who discussed "Some Design Features of a Pilot Plant Continuous Yarn or Fabric Finish Range;" Mayer Mayer, also of the Department of Agriculture, who spoke on "SRRL Loom Attachment for Weaving Extra Dense Fabrics;" Dr. M. J. Golglia of Georgia Tech who covered "Air Permeability of Parachute Cloth," and Peter M. Strang, Whitin Machine Works, Whitinsville, Mass., who explained "The Theory of Carding."

The old-style cotton mill was organized along strict military lines with authority and responsibility extended through one unbroken chain of command from top to bottom, Mr. Heard told the textile engineers and suppliers. Development and engineering were all done by the production man, with the result that both suffered from lack of attention at times.

The modern mill organization relieves the production supervisor of the engineering work and places it in the hands of a few specialists who can and should do a better job in these specialized tasks than the over-burdened production men could. "This means that the production men are able to devote more of their time to their real job, which is to get the most work done with the men, material and machines at their disposal. It simply means that employees are better able to specalize and thus become more efficient at a given job," said Mr. Heard.

Engineers make excellent supervisors and executive material, and because of his training an engineer is equally at home in production, engineering research or methods of work, Mr. Heard said. "The engineer is the only professional man I know who is by training a man who specializes in solving problems—of which a cotton mill is literally crammed full."

J. C. Edwards Jr. of Exposition Cotton Mills, Atlanta, vice-chairman of the textile division, presided at the one-day meeting. Mr. Edwards voiced the need for textile machinery manufacturers and their representatives to attend meetings of the A.S.M.E. textile division to become better acquainted with mill men and their problems.

Raw Cotton Producers Meet With Spinners

Producers of raw cotton recently took a first-hand look at operations of their biggest customer, the U. S. textile industry. They saw cotton processed from fiber into cloth and observed work being done with competitive fibers.

Representatives from the various Cotton Belt areas of the Deep South, Southwest and Far West met with spinners at two separate meetings in South Carolina. The first, at Clinton Jan. 19-20, was sponsored by the National Cotton Council; the second, at Clemson Feb. 3-5, was sponsored by the American Cotton Manufacturers Institute.

Cotton ginners and spinners agreed at the Clinton parley that stepped-up programs of research and education are needed to solve some of their mutual problems. Attention was centered on the need for preserving lint quality during ginning. One of the chief problems brought up for discussion was the adverse effect of over-drying on the spinning performance.

Joe Delany, superintendent of Joanna (S. C.) Cotton Mills, gave a tentative report on the spinning performance of cotton that had, for experimental purposes, been subjected to various degrees of heat in ginning. As of now, the tests strongly indicate that overdrying will, among other things, increase the number of ends down in spinning and weaving. This increases the number of workers needed to tend machines, reduces mill capacity, and brings about sharp increases in costs.

Mill men recognized the importance of drying equipment in modern gins, and credited the proper use of these devices with a great decrease in "rough preparation" over the past 15 years.

Spinners pointed out that they now have no practical method for recognizing overdried cotton before it enters the spinning process and causes trouble. Ginners, on the other hand, now have no simple, easy way to determine the moisture content of various loads of cotton coming to their plants; this is a serious handicap because lint moisture content is a critical factor in determining how much heat should be applied to an individual lot of cotton brought in for ginning.

Thus the study group strongly urged stepped-up research to provide both ginners and spinners with the instruments and techniques they need to deal with the problem of overdrying. Once this is accomplished, they pointed out, overdrying should be considered as an additional factor in the marketing system for cotton.

Among other recommendations of the group: (1) Further investigations of the practicality of storing seed cotton so that it may be processed in a more orderly and careful manner at the gin; (2) additional educational work among farmers to impress upon them that harvesting practices have an important part in determining lint quality and that they should not demand miracles of the modern ginner; (3) a stepped-up educational program to encourage ginners to make the best possible use of techniques and equipment already available.

The rise of production efficiency in some other parts of the world, without any appreciable narrowing of the "fantastic" U. S.-foreign wage gap, poses a growing threat to the entire U. S. cotton economy, an A.C.M.I. official said at Clemson. Citing sharp delines in overseas shipments of U. S. raw cotton and cotton goods, J. Craig Smith of Avondale Mills, Sylacauge, Ala., first vice-president of the A.C.M.I., said the cotton farmer and the cotton manufacturer "are faced with pretty much the same basic situation."

"American efficiency is becoming less of an off-setting factor against the low wage costs of foreign countries as those countries increase their own efficiency by more modern methods while there is no corresponding change in the wage gap," he said, adding: "Just as the rebuilt textile industries of Japan and Germany are modern by any standard, so is the introduction of improved cotton varieties and modern methods, even irrigation, in India and other countries filled with vast potentiality."

Mentioning that the livelihood and living standard of some 14,000,000 Americans are dependent on cotton in one way or another, the A.C.M.I. executive said that if the U. S. cotton and textile economies are ever permitted through trade policy to be undermined by low-wage foreign competition, "the destructive repercussions would penetrate the entire economic system."

Mr. Smith asserted that for U. S. efficiency to offset the wage gap, it would have to be three times greater than that of the highest paying competitor countries in Europe

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and from ten to 12 times as high as that of the most important low-wage competing countries.

In other words, he explained, average hourly textile wage rates in the United States are three times higher than in such countries as Great Britain, ten times higher than in Japan, and 12 times higher than in India, which has emerged as a major cotton goods export country.

For such reasons as these, he said, cotton producers as well as manufacturers have a common stake in an "American approach" to the world trade problem that would tend to stimulate cotton consumption in parts of the world where it is now "artificially" held down by a network of foreign restrictions inhibiting multilateral trade.

On the average, he pointed out, the U. S. mills consume about two-thirds of the domestic cotton crop, with consumption of inmported cotton amounting to a small fraction of one per cent. U. S. mill production in the last crop year represented more than twice the output of the cloth production of the United Kingdom and Japan combined, he cited.

"The U. S. cotton textile industry supplies to the consumers the most incredible abundance, variety and quality of textile products that have ever catered to human wants and at prices which, relative to wages paid, are the lowest in the world," Mr. Smith added. Per capita cotton consumption in the United States, he observed, is six times the world average.

Although improved technology and research promise a bright future for cotton, it must be kept constantly in mind that the first point of inter-fiber competition is the textile mill door, H. K. Hallett of Charlotte, N. C., president of the American Cotton Manufacturers Institute, said.

Mr. Hallett, who is the executive head of the Kendall group of a half dozen cotton mills in the Carolinas, reminded the producers that "we in the manufacturing business ran up against a limit as to how far we can go, in so far as cotton is concerned" since cotton manufcturers, unlike chemical fiber industries, have no control over raw material resources.

"Whatsoever you do with the fiber—the extent to which you affect cotton quality in any way, or cotton prices—has a very direct bearing on our ability to make cotton competitive," Mr. Hallett said.

Describing textile progress and the forward advance of American cotton during the last decade as "nothing less than sensational," Mr. Hallett continued:

"Breeders, farmers, ginners, warehousemen, merchants, textile manufacturers and textile merchants, all together, have worked co-operatively to attain the present point of success. The benefits of such co-operation—everything that we have reaped up until now—only suggest the size of our responsibilities that lie ahead."

Chattanooga Yarn Group Outing May 20-21

The 1954 outing of the Chattanooga (Tenn.) Yarn Association will be held Thursday and Friday, May 20-21, at the Chattanooga Golf and Country Club. Recently-elected officers of the association are: president, Peter R. Branton of Comer-Avondale Mills; vice-president, Freeman R. Harris of Standard-Coosa-Thatcher Co.; secretary, Frank Carter of Textiles Inc.; treasurer, Robert S. Mebane Jr., of R. H. Griffith Yarns.

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Council Parley Stresses Research, Promotion

The vital role played by research and promotion in helping cotton to gain and maintain its strong competitive position in the market was emphasized by speakers at the 16th annual convention of the National Cotton Council Feb. 1-2 in Atlanta, Ga.

Harold A. Young of North Little Rock, Ark., retiring council president, called for an intensive program of promotion and research to strengthen cotton and cottonseed products and for a continuation of the fight against trade barriers which restrict cotton commodities.

Mr. Young recommended a large budget to permit the council to more adequately cope with cotton's increasing competition. "While the youthful spirit of this council lives, our industry's eyes must never be on its past achievements, nor on its present security, but on its future program," he stated.

The council approved 12 recommendations of the committee on utilization research, all pointing up means for continuing the aggressive program for increased cotton consumption during the coming year. The approved recommendations are:

(1) To continue effort to secure adequate federal and state programs of agriculture research and education.

(2) To increase emphasis on cotton and cottonseed utilization, research by federal and state groups . . . and all other likely organizations, private and otherwise, to meet the growing challenge of competing materials.

(3) To endorse and support the establishment in the Bureau of Census of adequate statistical studies.

(4) To continue to keep current data on consumption and market trends.

(5) To make further analyses of quality and cost factors in key markets.

(6) To define and publish technical research proposal for studies calculated to improve the efficiency of cotton processing and the quality of cotton products.

(7) To continue to advise, consult and co-operate with public and private research groups engaged in studies on cotton.

(8) Through the Cotton Research Clinic, the Chemical Finishing Conference, and similar meetings, to encourage and accelerate the application of cotton research developments by industry.

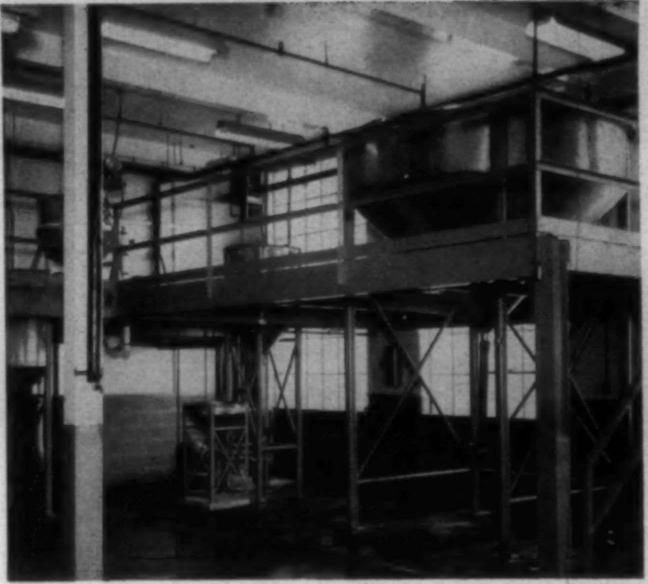
(9) To commend highly various missions which went abroad to strengthen and expand foreign markets.

(10) To favor the establishment of sound standards, and oppose consumer standards which erroneously lead textile users to accept inferior products which compete with cotton.

(11) To co-operate with all federal and state agencies to assure equitable and practical administration of the Federal Flammable Fabrics Act without unnecessary burdens on manufacturers.

(12) To enlist the co-operation of industrial firms in developing cotton products directly competitive with other materials.

Promotion of cotton product sales in five major fields of activity will be stepped up during the year, Ed Lipscomb, director of sales promotion and public relations, told the annual meeting. In his report, Mr. Lipscomb outlined how cotton planned to hold its own during the period of intensive competition soft goods now were entering. The



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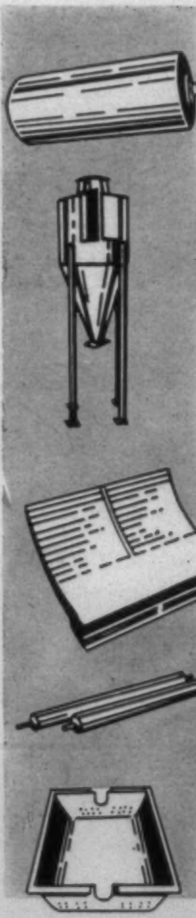

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five major fields of activity to be stressed were listed as follows:

(1) Intensification of work with fabricators and retailers, including a heavier advertising schedule and a larger volume and variety of merchandising plan books and training materials.

(2) A schedule of merchandising tie-in with national magazines.

(3) A campaign to obtain for cotton the benefit of some $8 million in advertising space in magazines, now devoted to cotton products but in which fiber content is not identified.

(4) Addition of 87 cities, with a monthly circulation of 85 million, to the list of those already included in cottons transit advertising program.

(5) Assistance to other countries in setting up sales programs for cotton.

Dr. M. K. Horne Jr., the council's chief economist, reported that "38 per cent of the United States rayon industry, with fine modern management and assets of a billion dollars or more, is idle primarily because cotton has learned to fight back . . . " Considering cotton's loss of the tire cord market, Dr. Horne said: "We were researched out of this market because high tenacity rayon has a cost advantage, resulting from 15 years of patient and expensive research." Cotton's losses to burlap and to paper would have been greater, Dr. Horne concluded, were it not for the "powerful defensive campaign" sponsored by the council.

According to Herschel S. Newsom, master of the National Grange, the development of new markets is the most important job confronting this country's cotton industry. "We can't be militant internationally and isolationists economically," he warned.

Lamar Fleming Jr., board chairman of Anderson, Clayton & Co. and a member of President Eisenhower's Commission on Foreign Economic Policy, told the cotton men that free trade and free convertibility of currencies could bring a solution to both international trade and peace problems. He branded as "stupid" the blocking of trade with Communist nations in goods that would ease the lives of the Soviet people without strengthening their war potential.

The National Cotton Council, believing that the convertibility of key currencies is basic to the return of normal world trade and the sustained expansion of American agricultural exports, proposed the beginning of informal conversations leading to a program of convertibility be started between the United States and Great Britain.

Such conversations would give consideration to the establishment of an International Exchange Authority in which all countries prepared for convertibility would be eligible to participate. This was proposed and unanimously approved.

It was further proposed that this agency, jointly controlled and financed, serve as an expanding nucleus of convertibility, increasing the incentives of inconvertible countries to restore trade equilibrium and sound currencies. It was suggested that funds now idle in the International Monetary Fund might be used for this undertaking.

A. L. Durand of Hobart, Okla., was elected president of the council, succeeding Mr. Young, president for the past six years. Mr. Durand becomes the third president of

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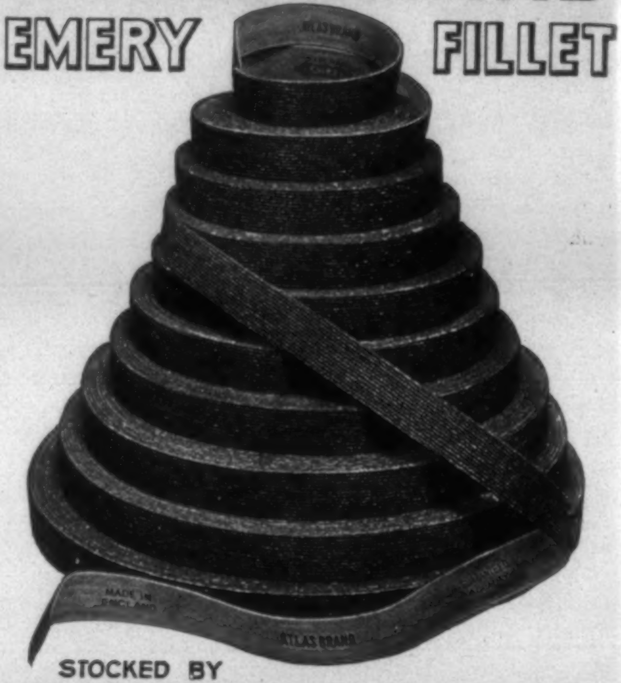

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the group. Oscar Johnston of Greenville, Miss., was founder and first president of the cotton council.

Named to the council board of directors, representing spinners, were: A. K. Winget of Albemarle, N. C., board chairman, American & Efird Mills; Fred W. Symmes, president of Piedmont Plush Mills, Greenville, S. C.; Charles C. Hertwig, president of Bibb Mfg. Co., Macon Ga.; A. B. Emmert, vice-president of Dan River Mills, Danville, Va.; and J. Craig Smith, president of Avondale Mills, Sylacauga, Ala., and first vice-president of the A.C.M.I. Mr. Emmert also was named chairman of the North Carolina-Virginia unit of the council and Marshall C. Stone of Pacolet (S. C.) Mfg. Co. was named vice-chairman of the council's South Carolina unit.

Kem President Writes Book On Stock Market

Edgar S. Genstein, president of Kem Products Co., Newark, N. J., manufacturer of textile sizings and chemical specialties, has turned author. Recently made available by Investment Research Press is Mr. Genstein's book on the stock market: *Stock Market Profit Without Forecasting—A Research Report on Investment by Formula Plan.*

The book offers original plans for computing relationship of stock prices to normal value, to determine whether stocks should be bought or sold. The author has successfully delineated the major buying and selling zones.

One reviewer states that Mr. Genstein has applied to the movement of stock prices "the objective analysis one might make in studying chemical compounds." Perhaps analysis by a chemist is what the stock market lacked and needed, the author suggests.

Reflecting the interest created by the book, the author reports that although it was published in January, already orders have been received from New England to Honolulu, and Texas to Canada.

Celanese Offers Award To Encourage Designers

A nationwide program to encourage the development of American textile designing talent and to increase the volume of new fabrics for commercial production was inaugurated recently by Celanese Corp. of America in co-operation with the country's leading textile schools.

Representing the first converted effort in the direction of achieving national recognition for young American designers, the Celanese Award for Fabric Creation will grant the national and local prizes on an annual basis. The competition is open to all enrolled students in textile schools affiliated with the National Council for Textile Education.

Eight schools have indicated that they will participate in the Celanese-sponsored program. They are: Lowell Textile Institute, Rhode Island School of Design, Bradford-Durfee Technical Institute, Philadelphia Textile Institute, Clemson College, North Carolina State College, Alabama Polytechnic Institute and New Bedford Textile Institute.

The Celanese program is based on the assumption that fresh ideas in fabric construction emanating from degree students in textile schools can be a great stimulant to the entire American textile industry.

The national award will consist of a three-day all-expenses-paid trip to the New York market and to meet textile executives. Cash awards also will be made at each

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  Hydrocop and 3B Softener
  Emulsion C-4R—lubricant
  Ruxite NF—conditioner and softener
Softeners and Anti-static Compounds—
  Regent Coning Oil—Orlon, Dacron, Acrilan, Nylon, Acetate
  Spinol RL—Orlon, Orlon-Wool blends, Dacron
Laurel Hosiery Finishes—all fibers
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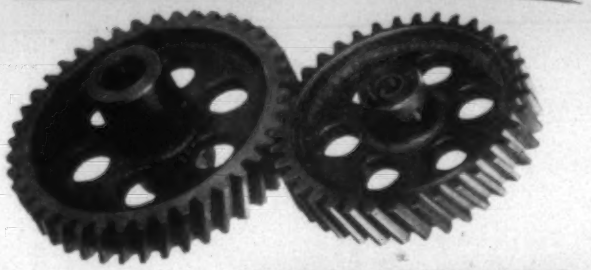

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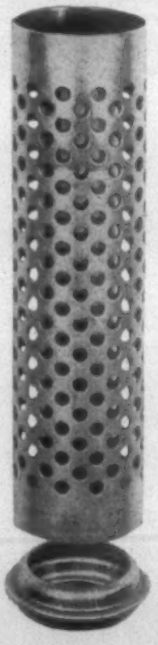

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school from which four or more entries are submitted. All designs deemed suitable will be marketed, and efforts will be made to identify the student designer and his school with the promotion of the fabric.

All entries in the 1954 Celanese Award for Fabric Creation must be submitted before May 15, and announcement of results will be made on June 1. In order to qualify for a prize the fabric must be directly related to some existing or future end-use in a practical sense in women's wear, children's wear, men's wear and home furnishings.

No limitation is placed on the use of commercially available yarns to produce fabrics. However, all fabrics entered must be of, or contain a substantial portion of, Celanese brand yarns or fibers. Celanese Corp. of America will supply a variety of its own yarn types in reasonable quantities to each student and, in addition, will arrange to procure other than Celanese acetate or rayon for a blend or combination fabric.

Among the points considered in judging the entries will be originality; suitability for use; beauty of texture or pattern; adaptability to fashion; draping qualities; color combinations and workmanship. In hand woven entries the ease of translation to power loom production will be an additional consideration.

P.T.I. Alumni Reunion Scheduled June 11

The 53rd annual alumni reunion of Philadelphia Textile Institute will be held Friday, June 11, according to an announcement by reunion chairman Edwin Michie of Andrew Y. Michie & Sons, and Edward G. Haack, alumni association president, of General Dyestuffs Corp.

As in past years, the affair will take place at the Manufacturers Golf and Country Club, located in Oreland, Pa., suburban to Philadelphia. The entire facilities of the club will be available to the graduates and former students of the institute and their guests. Annual meeting of the association will take place in the late morning; included in the order of business will be election of officers for the next year.

Luncheon in the grill will follow, and then the annual golf tournament, which offers a variety of prizes for both members and guests. For non-golfers, a number of other outdoor and indoor activities will be available. The day's events will close with the annual reunion banquet. This will begin at 7 p. m. and will feature, in addition to the club's usual fine menu, awarding of prizes and entertainment.

School Offers Industrial Management Course

A new high in industry-education co-operation was reached at Lowell (Mass.) Technological Institute with the inauguration of a new industrial management course, featuring a nationally known team of management consultants as lecturers.

Nathaniel M. Mitchell, president of Barnes Textile Associates, nationally known management consultant organization, was the keynote speaker at the first lecture on Feb. 2. Mr. Mitchell spoke on the subject, "How to Make an Engineering Survey."

Some of the outstanding practical subjects to be presented by these lectures will be: Mechanical and Operating Surveys, Job Description and Evaluation, Operating or Frequency Studies, Time Study M.T.M. and B.T.A. Methods, Production and Task Calculation, Incentive and Rate Setting, Methods and Materials Handling, Accelerated Training, Attitude Surveys and Production Engineering and the Cost Department.

The series of two-hour lectures which will include a short question and answer period will be illustrated by practical cases from actual industry experiences. The lectures are held on Tuesdays from 1 to 3 p. m. and Wednesdays from 11 a. m. to 1 p. m., and will continue through the last week in May. Industry representatives are cordially invited to attend all lectures.

Woven Wool Apparel Fabric Output Increases

Production by 75 firms of civilian woven wool apparel fabrics in the first 11 months of 1953 showed gains over the same period of 1952, according to the National Association of Wool Manufacturers. Until the third quarter of 1953, this increase in civilian goods had offset a sharp drop in military fabric production.

Production of men's wear goods rose 28.5 per cent while women's wear was up 3.9 per cent. Military output dropped 76.8 per cent so that the total for all apparel fabrics, including military, was off 5.2 per cent. Sales of men's wear goods by the 75 firms fell 6.5 per cent though sales to the women's wear trade rose 1.9 per cent. Sales to the government dropped 73.1 per cent and total sales of apparel cloth, including military, dropped 12.6 per cent.

The 75 firms account for about 50 per cent of such apparel cloths produced in the U. S. The figures were reported in the January issue of N.A.W.M.'s "Current Statistics of Wool Manufacture."

Sales and production of auto upholstery fabrics reported by most woolen and worsted mills making such goods showed increases in the first 11 months. Sales rose 3.6 per cent and production 11.4 per cent.

Shipments of Bradford system worsted weaving yarn by 47 firms dropped 21.1 per cent but Bradford knitting yarn shipments gained three per cent. The 47 firms spin about 60 per cent of the Bradford yarn produced in the U. S.

Shipments of French system worsted weaving yarn were unchanged and knitting yarn shipments were off only 1.7 per cent in the first 11 months. These figures were estimated for all firms having French spindles.

Safety Contest Winners Named In Alabama

The names of winning mills in the 13th annual Alabama Statewide Textile Safety Contest have been announced by Dwight M. Wilhelm, executive vice-president of the Alabama Cotton Manufacturers Association.

Mr. Wilhelm made the announcement after receiving the names of the three winning mills in each division from J. G. Hanlin, chief of the division of safety and inspection of the Alabama Department of Industrial Relations. In naming the winners Mr. Hanlin said, "The average accident frequency of the contesting companies during the years 1948 to 1952, inclusive, has been consistently lower than that of companies reporting to the National Safety Council, 1953 figures are not yet available from the National Safety Council."

The 1953 winners in the weaving and spinning division are: (1) Goodyear Decatur Mills, Decatur; (2) Lakeside

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MAGIC-EYED WOOL—One of the most recent developments in electronic instruments for testing the condition of wool yarn is to be exhibited by Shaw Electronics at Olympia during the 1954 British Industries Fair held simultaneously in London and Birmingham from May 3 to 14. The apparatus is claimed to be an entirely new method designed to test closely packed spools of yarn where the moisture content may be unevenly distributed along the length and therefore away from the surface of the package. It has a "magic-eye" tuning indicator which is used in conjunction with a moving dial to give a precise result.

Mills, Guntersville; (3) Tallassee Mills, Tallassee. The 1953 winners in the spinning division are: (1) Gurney Mfg. Co., Prattville; (2) Adelaide Mills, Anniston; (3) Linen Thread Co., Blue Mountain.

Gurney Mfg. Co. has won first place in the spinning division for three consecutive years and now has permanent possession of the Comer Safety Trophy. The awards will be presented at a banquet during the association's annual meeting in Biloxi, Miss., on March 19.

Contestants in the 1953 contest included: (spinning and weaving division) Florence Cotton Mills, Florence; Bemis Bros. Bag Co., Talladega; Indian Head Mills Inc., Cordova; Julia Cade Mills Inc., Albertville; Opp Cotton Mills, Opp; Pepperell Mfg. Co., Opelika; Dwight Mfg. Co., Alabama City; Goodyear Decatur Mills, Decatur; Buck Creek Mills, Siluria; Cowikee Mills, Eufaula; Avondale Mills, Sylaçauga; Tallassee Mills, Tallassee; West Point Mfg. Co., West Point, Ga.; Micolas Cotton Mills, Opp; Huntsville Mfg. Co., Huntsville; Geneva Cotton Mills, Geneva; Alabama Mills Inc., Birmingham; W. A. Handley Mfg. Co., Roanoke; Lincoln Mills of Alabama, Huntsville; Russell Mfg. Co., Alexander City; Opelika Mfg. Corp., Opelika; Valley Mills, Columbiana, and Lakeside Mills Inc., Guntersville.

Spinning division contestants in the 1953 contest included: Linen Thread Co., Blue Mountain; Adelaide Mills, Anniston; Boaz Mills, Boaz; Standard-Coosa-Thatcher, Piedmont; California Cotton Mills, Uniontown, and Gurney Mfg. Co., Prattville.

Two Symposia To Feature Chemical Show

Two symposia of outstanding interest to the chemical industry will be features of the Eighth National Chemical Exposition to be held in the Chicago Coliseum Oct. 12-15, 1954. One will deal with the packaging, transportation and precautionary labeling of chemicals and will be sponsored by the Manufacturing Chemists' Association. The second, sponsored by the Chemical Market Research Association, will deal primarily with the special problems of exposition marketing, in which the exposition itself will be offered as "clinical material" for study by the speakers.

The two symposia will combine with the already announced industrial and engineering chemistry lecture series, sponsored by the editors of *Industrial & Engineering Chemistry*, to round out a broad-interest technical program which will add value to the exposition far beyond the ideas, new products and new methods which will be the dominant features of the big market.

Dr. T. U. Marron, chairman of the exposition committee of the Chicago Section of the American Chemical Society, revealed that a number of organizations never before represented have reserved space in the 1954 exposition. The exposition and its accompanying programs will revolve around the theme: "The Chemical Industry in Everyday Living."

Cotton Flameproofing Treatment Described

A publication has been issued by the U. S. Department of Agriculture (AIC-364, Nov. 2, 1953, processed) to set forth technical details on a new, durable, flameproof and glowproof, and to a lesser extent wrinkle and rot-resistant finish for cotton textiles, developed by scientists of its Southern Utilization Research Branch, New Orleans, La.

The treatment arose from work done by W. A. Reeves and J. D. Guthrie, in research undertaken by the Southern Branch because of the great need for a better, durable-type, flame-retardant finish suitable for many of the end-uses of cotton. This work was supported in part by the Quartermaster Corps.

Key discoveries are: Tetrakis-(hydroxymethyl) phosphonium chloride (THPC) reacts with a variety of amino

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compounds to form insoluble, flameproof resins; and permanent flame-resistance and other desirable properties are imparted to cotton fabrics by treating with an aqueous solution containing THPC with methylolmelamine and urea, followed by drying and curing.

Urea and melamine polymerize with THPC to form the resin inside the fibers, and this resin does not wash out. The degree of flameproofing imparted depends on the amount of resin formed and on the type of fabric construction. The treatment can be applied either continuously or in steps on standard chemical-finishing equipment. A typical solution contains 15.8 per cent THPC, 9.5 per cent trimethylolmelamine, 9.9 per cent urea, and three per cent triethanolamine.

THPC, $(HOCH_2)_4$ PCL, is a crystalline compound, soluble in water and in many organic solvents. Produced by saturating a water solution of formaldehyde and hydrochloric acid with phosphine, and then evaporating the solution, it is available from at least one chemical company in limited quantities.

The U.S.D.A. publication describes application of the treatment to different constructions of cloth, drying and curing conditions, and properties of the treated materials. A free copy may be obtained by writing the Southern Regional Research Laboratory, 2100 Robert E. Lee Blvd., New Orleans 19, La.

Book Themes Organic Coating Technology

Volume I of *Organic Coating Techniques* by Henry Fleming Payne was published this month by John Wiley & Sons. A survey of the chemistry, manufacture, and applications of the oils, resins, varnishes, and high polymers used in organic coating, the book emphasizes the practical aspects of the subject. In this respect, a great many scientific formulations show the use of the materials discussed. Sufficient basic theory is included, however, to clarify the physical and chemical phenomena associated with the drying of oils, the resinous state, and the production and behavior of high polymers.

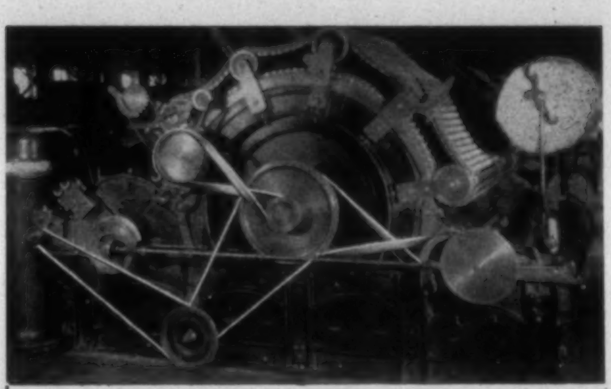
Designed for workers in the textile and related industries, *Organic Coating Technology* deals with such subjects as vegetable and marine oils, varnish resins, varnishes, driers, volatile solvents, alkyd resins, and urea and melamine-formaldehyde resins. Mr. Payne also covers rubber resins, plasticizers, cellulosic polymers, vinyl resins, acrylic ester resins, silicone resins, and test methods.

Technical editor of the American Cyanamid Co., and adjunct professor of chemical engineering at the Polytechnic Institute of Brooklyn, the author has 30 years working experience in the field. Now in preparation, Mr. Payne's second volume will cover pigments and pigmented coatings in a similar volume. Vol. I of *Organic Coating Technology* contains 674 pages and is priced at $10.

Southwest Research Institute Developments

Research work in progress at the Southwest Research Institute, pertinent to textiles, is described in a recent issue of the publication *Tomorrow Through Research*. The article states, in part:

"Patent application has been filed by the institute for a new process for chemically treating leather to make it more durable for industrial applications. This process imparts



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qualities to the leather that are particularly advantageous when leather is used on textile machinery for the spinning of fine cotton yarns.

"A study of cotton mercerizing has resulted in suggestions for improving the economics of the process. It is believed that these and future projects in this field will stimulate the growth of fiber processing industries in the Southwest and other sections of the country.

"In regard to textile end-product production problems, Southwest Research Institute is also applying its scientific and technical staff capacities to the problem of ever-increasing manufacturing costs and their resulting burden on all segments of our economy. A current project for a leading clothing manufacturer involves the development of semi-automatic machinery that will permit the production of greater quantities of improved quality clothing at less cost. It is believed that this machinery will contribute to worker productivity with less individual effort, to resulting lower manufacturing costs, and product distribution at lower prices without sacrificing reasonable and fair employee earnings or manufacturer's profit margins."

Recent Patents To Carolinians

Among recent patents granted to Carolinians, according to Paul B. Eaton, are the following:

Marshall Field and Co., Chicago, Ill., has been granted Patent No. 2,613,695 upon application of Ivar O. Moberg of Spray, N. C., for a distortion weave fabric structure wherein a ground or base fabric area is provided having spaced, tightly woven areas extending weft-wise of the fabric.

Among other patents recently issued are Patent No. 2,608,218 to the estate of George F. Bahan of Greenville, S. C., for thread cutting temple for looms; Patent No. 2,614,682 to Gadsden E. Shand Jr. of Columbia, S. C., for a conveyor system for spoolers.

Ansul Slates 11 Fire Training Schools

A record number of 11 industrial Fire Training Schools—the first starting May 24 and the last starting Sept. 20—will be held during 1954 on the fire test field of the Ansul Chemical Co. at Marinette, Wis., the company announces. Each school will last three days, the starting dates being May 24; June 14, 21, 28; July 19, 26; Aug. 16, 23, 30; Sept. 13, 20.

The school is held for the purpose of training plant fire marshals, safety directors, fire brigade leaders and military and municipal fire suppression officers in the latest techniques of extinguishing fires with dry chemicals. The students then return home better equipped to train personnel under them.

Last year, a record number of 225 persons attended nine schools, the largest proportion of enrollees coming from the metal fabrication, chemical, petroleum, gas, steel, electrical, railroad, aviation, paper, transport, food and mine industries.

Registration is limited to 25 men for each school, with reservations accepted on a first-come, first-served basis. Ansul provides all instruction and use of equipment free of charge, the students paying only for their transportation and living expenses while at Marinette.

Classes are held on the Ansul company's eight-acre fire-test field, which is capable of simulating every type of fire found in industry. Students are taught to use hand, wheeled and large stationary units of dry chemical equipment against flammable liquid and propane gas fires of all sizes and types. Other types of extinguishing agents also are available in case any student has a special fire problem.

In addition to the field work, the schedule calls for group discussion periods, showing of fire-fighting motion pictures, and a brief tour to show how fire extinguishers are manufactured.

Address inquiries to: Customer Training Fire School, Ansul Chemical Co., Marinette, Wis.

Nylon Carpet Withstands Heavy Traffic

A carpet of Du Pont nylon installed more than six years ago in a heavily-traveled section of a leading hotel in Wilmington, Del., is still in good condition and attractive although more than 4,000,000 pairs of shoes have scuffed over it.

In the six years since the Wilton weave carpet was placed on the stairs and foyer leading to the cafeteria of the Hotel du Pont it has showed little signs of wear. Its appearance is still good and the hotel has no present plans to replace the first carpet installed in a public place. A carpet of another material installed in the same location in April 1946 was replaced, badly worn, in June 1947.

A second nylon carpet was installed in the Hotel's Brandywine Room in September 1947: To date an estimated 1,860,000 patrons have walked on it, yet it remains in very good condition.

In both these locations nylon carpets were subjected to the most difficult test of all—that of actual service wear. The carpet on the cafeteria steps and foyer has withstood almost daily lines of waiting patrons, particularly heavy on rainy days. The Brandywine Room carpet has received its share of the inevitable spilled food and drink, in addition to daily traffic.

As a result of the hard-wearing qualities of nylon, the hotel plans to acquire a third nylon carpet for its main dining room—the Green Room. According to the hotel manager, "there is nothing as durable as nylon carpeting for areas that are subjected to heavy traffic."

The Wilmington hotel, like many other hotels and restaurants using nylon carpets, has found that, although nylon is comparable in price to other fine carpets, low maintenance costs and minimum interruptions in room usage, combined with long wear, are proving nylon to be a less expensive floor covering over a period of years. In addition to these characteristics, nylon carpets are free from possible damage by moths or other insects, and nylon is non-allergic.

Those in the woolen textile industry are beginning to show real concern over the trend towards "casual" clothing, which is hurting their business. American mills used 748,000,000 pounds of clean, raw wool in 1946; in 1952 they used only 463,000,000 pounds.

Tobe C. Davis of Tobe & Associates Inc., New York business statisticians, says: "Although his family is larger, the average American spends less for clothes. Out of his new, bigger income he spends less than eight per cent for everybody's clothing needs, two percentage points less than he spent before the war."

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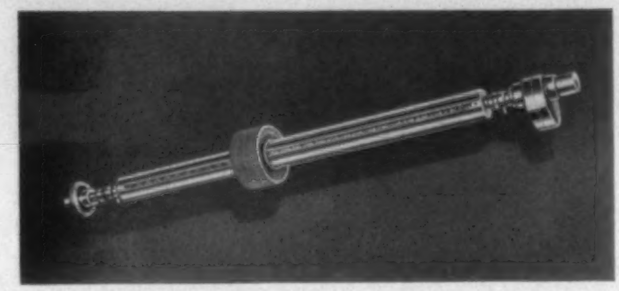

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Upward Trend In Prices Of Textiles Seen

Prices of textiles have been substantially reduced in "rolling adjustment" to levels below June 1950 pre-Korea lows and an upward turn is in prospect for the not distant future, W. Ray Bell, president of the Association of Cotton Textile Merchants, stated recently.

Unlike many durable goods industries whose previous expansion had been uninterrupted since 1950, textiles have experienced three years of continuous adjustment and unabated competition, he stated. Prices and profits have contracted, inventories have been held down, and speculative accumulations of goods are lacking. Meantime there has been no slowing in the rate of public consumption and prospects for heavy retail volume in soft goods in 1954 are generally considered favorable.

Mr. Bell's analysis of textile prospects was presented in his report to the annual meeting of the association, held Feb. 11 at 40 Worth Street. At the meeting four directors were elected for three-year terms on the association board, as follows: Donald Comer Jr., Southeastern Cottons Inc.; Marvin R. Cross, Greenwood Mills Inc.; Saul F. Dribben, Cone Mills Inc.; and Stanley Phillips, Cannon Mills Inc. For terms of one year Duncan Rogers, Pepperell Mfg. Co. Inc., and Ridley Watts, Spartan Mills Inc., were elected. All are of New York.

Mr. Bell noted that 1953 had marked the peak point in post-war expansion of business generally to date, and estimated production of cotton broad woven goods, despite a reduced last quarter level of activity, at 10.2 billion linear yards, a new peacetime high. For 1954 he cited general business predictions ranging from a slight downward adjustment to occasional forecasts of real depression which arouse "suspicion of political propaganda." Administration views of a minor slump giving way to an upturn he felt to be a particularly apt appraisal if applied to the textile industry.

Since first quarter 1951, he said, textiles have shown repeated movements of extended recession and gradual recovery. The average 17 gray cloth constructions as reported by the government has dropped from over 96 cents a pound in February 1951 to 63.48 cents in December 1953. This is a post-war low excepting a brief period in 1949. Mill margins, or the difference between cotton cost and price of cloth, have dropped from 50 cents a pound in early 1951 to 28.56 cents currently. These Agriculture Department figures, he stated, are borne out by the Bureau of Labor Statistics whose December 1953 figures show cotton broad woven goods below June 1950 pre-Korea levels, while for all commodities in their index average, prices were ten per cent above that period.

This, he stated, indicates a thoroughly liquidated textile prive level and a "maximum attractive value to the consuming and distributing trades." In many areas, he said, "price scalping has been exhausted" unless unprofitable

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operations are to become the accepted standard of business. Meantime, "public consumption plus adequate business inventories will continue to require an annual output of cotton broad woven goods measuring around ten billion linear yards," subject to some slight modifications from the minor item of decreased military buying and the uncertainty of export volume. "On a per capita basis, after deduction for probable exports," he added, "this would be a lower yardage than was produced in 1939."

The new desires of a population of 161 million can now be more economically satisfied than at any time in the post-war period, Mr. Bell commented. Even in depression periods, retail consumption has continually improved from year to year. Each textile slump, he noted, has previously involved liquidation of inventory accumulations, often amassed at high prices. Since the current situation was preceded by no speculative buying, has been founded on exceptionally stable cotton values, and involves little if any inventory loss, the background conditions are highly favorable for confidence and activity on the buying side. Added to this is the impounding of vast quantities of cotton in government loans which gives assurance of no decrease in cotton value, while a substantial reduction in 1954 acreage may have a salutary effect.

Reeves Establishes Professorships At Wofford

Five professorships have been established at Wofford College, Spartanburg, S. C., by John M. Reeves, president of Reeves Bros. Inc., and leader in the textile industry. Five professors of the faculty will receive annual stipends in addition to regular salaries under the grant. The professorships go into effect immediately and are retroactive to the beginning of the year. Dr. Pendleton Gaines Jr., Wofford president, announced the grant at a faculty meeting.

Holders of the John M. Reeves Professorships are Dr. Charles Cauthen, Dr. Walter Raymond Leonard, Dr. Charles Franklin Nesbitt, Dr. Clarence Clifford Norton and Prof. John Leonard Salmon.

"Mr. Reeves, a long-time friend of Wofford College, has always been an active friend of education, a leader in the work of the church, and a far-sighted philanthropist," Dr. Gaines commented. "His action in permanently endowing liberal arts professorships at Wofford College is an outstanding example of enlightened philanthropy and industrial statesmanship."

Annual Combed Yarn Parley Sept. 23-24

The 29th annual meeting of the Combed Yarn Spinners Association will be held Sept. 23-24 in Asheville, N. C., it is announced by C. C. Dawson, executive secretary. Headquarters hotel will be the Grove Park Inn. The program for the event will be announced later.

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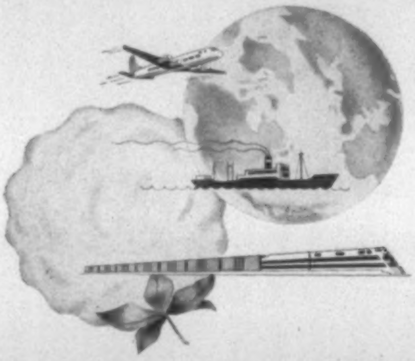

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ROY & SON CO., B. S., Worcester, Mass. Sou. Plant: Linwood at 2nd St., Gastonia, N. C., Phone Gastonia 4-2126. Reprs.: Thomas M. Brockman, Gastonia, N. C.; William P. Cooper, Gastonia, N. C.; Leon F. Frye, Cornelius, N. C.

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WATSON-WILLIAMS MFG. CO., Millbury, Mass. Sou. Reprs.: John Wyatt, P. O. Box 701, Greensboro, N. C.; Arthur J. Bahan, P. O. Box Drawer 779, Greenville, S. C.

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WHITIN MACHINE WORKS, Whitinsville, Mass. Sou. Office, Whitin Machine Works Office and Plant, Dowd Road, Charlotte, N. C., R. I. Dalton, V.-Pres. and Sou. Agt.; Charlotte Repair Shop, Z. C. Childers, Sales Mgr.; Atlanta, Ga. Office, 1015 Healey Bldg., B. B. Peacock, Sou. Agt.; Spartanburg, S. C. 724 Montgomery Bldg., R. W. Dunn, Sou. Agt.

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– TEXTILE INDUSTRY HAPPENINGS AS THIS ISSUE WENT TO PRESS –

PERSONAL NEWS

John Flowe has been transferred from the executive offices of Burlington Mills Corp. at Greensboro, N. C., to Newton, N. C., as assistant superintendent of Bur Mil's rayon plant in that city. Mr. Flowe replaces Dick Wilkins, who in turn was transferred to the main office in Greensboro. . . . Olin C. Shedd is the new superintendent of the Steele Plant at Cordova, N. C., replacing J. H. Robbins, resigned. Mr. Shedd formerly was in the spinning division at Fayetteville, N. C.

Ed Dickard, since 1946 personnel director at Calhoun Mills, Calhoun Falls, S. C., has been transferred to F. W. Poe Mfg. Co., Greenville, S. C., as personnel supervisor. Both plants are units of Ely & Walker Dry Goods Co. . . . At Calhoun Mr. Dickard has been succeeded by Densel Dockery, formerly quality control man.

D. H. Tyson has been elected treasurer of Botany Mills Inc., taking over the post from George W. Shaddock, president, who previously held this title. Before joining Botany last November, Mr. Tyson was controller of Sylvania Electric Products Co.

M. V. Wells has been named personnel director for Greenwood (S. C.) Mills. He will be in charge of all phases of personnel work for the five plants of the concern. Mr. Wells was with Klopman Mills, Asheboro, N. C., before joining Greenwood Mills. His other associations include United States Rubber Co. textile division and Burlington Mills Corp.

Ernest Nathan recently sold his interests in Metro-Atlantic Inc., Centredale, R. I., and has resigned as chairman of the board and treasurer. He will make known his plans later. Prior to joining Metro, Mr. Nathan was president of Warwick Chemical Division, Sun Chemical Corp., and vice-president of the parent firm. He founded Warwick in 1930 and sold the company to Sun Chemical in 1945. He was named vice-president of the parent organization in 1948, and resigned from Warwick and Sun in July 1952.

R. H. Baker, for the past 12 years superintendent of dyeing, bleaching and finishing at Mooresville (N. C.) Mills, recently became associated with Geigy Chemical Co. Inc., Charlotte, N. C., in a technical capacity.

Recently elected new directors of American Thread Co. were: E. B. Shaw, vice-president in charge of manufacturing of American Thread Co.; B. E. Bowne, vice-president in charge of industrial thread sales division of the company; Harry Horrocks, vice-president in charge of the yarn sales division and production planning manager of American Thread; Robert O. Huffman of Morganton, N. C., president of Morganton Full-Fashioned Hosiery Co., Drexel (N. C.) Hosiery Co. and Huffman Full-Fashioned Mills Inc.; and Malcolm G. Jones, president of Robbins Mills Inc.

Lawrence A. Stead was retired from active service with Aberfoyle Mfg. Co. as general manager and chief chemist. He will be succeeded by William T. Galey III, vice-president and sasles manager of the Northern division of the company. Mr. Galey has been with the company since 1938. His father is chairman of the board. Mr. Stead, who started with the company 38 years ago as chief cfhemist in charge of wet processes, has often been called the "Dean of Textile Chemistry." Prior to joining Aberfoyle he had been instructor of textile chemistry at the Philadelphia Textile Institute and has made many contributions to the chemical industry, especially in the development of chemical and electrical controls to determine the percentage of strength of the various chemicals which had heretofore been determined by appearance, feel or taste. Also, textile industries have almost universally adopted his recommendations and studies into the drying of yarns and fabrics after bleaching, dyeing, mercerizing, etc. Although retiring from active service with the company, Mr. Stead will continue to act as consultant of the various departments which he supervised in the past. . . . Albert S. Wilson Jr., who joined the company in 1945, has been named sales manager of the Northern division in addition to his other duties as sales manager in charge of synthetics.

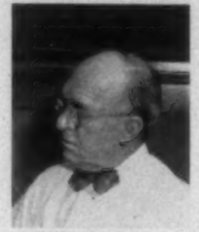
W. T. Galey III

A. S. Wilson Jr.

W. H. McDonald recently was elected vice-president and treasurer of Southern Mercerizing Co. Inc., Tryon, N. C., succeeding the late William C. Ward. With the company about nine years, Mr. McDonald had been secretary, superintendent and a director. . . . James B. Pruitt, bookkeeper and office manager, was elected to succeed Mr. McDonald as secretary and was named a director. . . . Jack Lane, with the company since 1931 and head of the mercerizing department since 1945, replaces Mr. McDonald as superintendent.

P. Huber Hanes Jr. recently was elected president of P. H. Hanes Knitting Co., Winston-Salem, N. C., becoming the third generation of his family to hold the position. He succeeds his father, P. H. Hanes, who will continue to serve the company as chairman of the board, a position which he has held in addition to the presidency. . . . Three new members elected to the Hanes' board of directors are: John W. Hanes of New York City, president of Ecusta Paper Corp. and vice-president of Olin Industries Inc.; E. A. Morris of Greensboro, N. C., president of Blue Bell, Inc.; and R. F. Brooks, secretary and assistant treasurer of the knitting firm.

P. Huber Hanes Jr.


P. H. Hanes Sr.

Thurman Chatham, chairman of the board of Chatham Mfg. Co., Elkin, N. C., recently announced his candidacy for his fourth term in the U. S. House of Representatives. Mr. Chatham is a member of the House Foreign Affairs Committee.

George E. Glenn Jr., president of Exposition Cotton Mills, Atlanta, Ga., recently was elected a director of the Atlanta Cotton Exchange.

Samuel A. Cooper has been appointed manager of the synthetic fiber technical service department, National Aniline Division, Allied Chemical & Dye Corp. Following many years' association with Tennessee Eastman Co. in sales and technical service capacities, Mr. Cooper has been a vice-president of M. Salzberg & Sons, textile manufacturers, New York, for the past seven years. In his new position, he will be responsible for mill-application service in connection with Allied Chemical's nylon-type fiber soon to be produced at Hopewell, Va.

W. H. Hardeman recently retired as active manager of the Ella Division (Shelby, N. C.) and Kings Mountain (N. C.) Division of Consolidated Textile Co. but will continue to serve the company as consultant for both plants. Mr. Hardeman became associated with Consolidated in 1919. . . . Thad W. Hinson is the new manager of the Ella Division. Mr. Hinson joined Consolidated in 1929 upon his graduation from the School of Textiles at North Carolina State College. He has been assistant manager of the Ella Division since 1945.

Walter H. Hindle has been appointed associate director of research in charge of the newly-created dyeing and finishing section of the research department for the Chemstrand Corp., Decatur, Ala. Prior to joining Chemstrand Mr. Hindle was in direct charge of the dyeing and finishing research and development department of Burlington Mills Corp. His other associations include the Dominion Textile Co. of Canada and Bradford (England) Dyers Association.

Tom Cook

Tom Cook has been named sales representative in the Texas-Oklahoma area by Graton & Knight Co., Worcester, Mass. He succeeds his father, Harold Cook, who was with Graton & Knight for 38 years as sales represesntative in the Texas area. Mr. Cook will operate out of the firm's Dallas, Tex., office, selling the company's line of leather belting, textile leathers and packings of leather and synthetic rubber.

J. Edward Rooker Jr. of Warrenton, N. C., vice-president of Peck Mfg. Co. in Warrenton and vice-president of Clayton (N. C.) Spinning Co., was elected to the office of Potentate of Sudan Temple, Ancient and Arabic Order Nobles of the Mystic Shrine, at the recent annual meeting in New Bern, N. C. . . . Charles A. Harris of Somerset Mills, Roxboro, N. C., was appointed Outer Guard by Potentate Rooker.

OBITUARIES

Everard C. Brown, 85, retired treasurer of United States Testing Co., died recently at his home in Englewood, N. J., after a long illness. Mr. Brown, who retired in 1946, had been associated with the company since 1919. He is survived by his wife, a nephew and a niece.

Edgar L. Cantrell, 57, superintendent of Riverdale Mills, Enoree, S. C., died Feb. 15 after a brief illness. Mr. Cantrell was appointed superintendent at Riverdale in January. A veteran of more than 20 years in the textile industry, Mr. Cantrell's previous associations include Springs Cotton Mills at Fort Mill, S. C.; Mayfair Mills, Arcadia, S. C.; and Inman (S. C.) Mills.

Charles B. Johnson, 77, manager of Charles B. Johnson Machine Works, textile machinery firm of Paterson, N. J., died Feb. 9. Mr. Johnson is survived by his wife, one son, two daughters and a sister.

John C. White, 77, retired textile superintendent, at one time superintendent of four plants in Lenoir, N. C., died recently at his home in Belmont, N. C. Mr. White is survived by his wife, three sons and three daughters.

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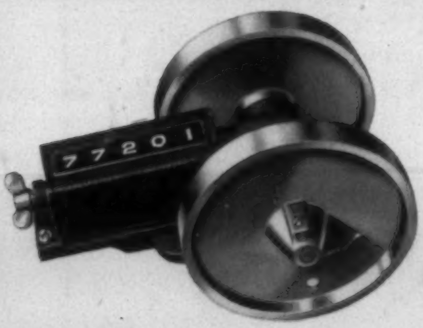
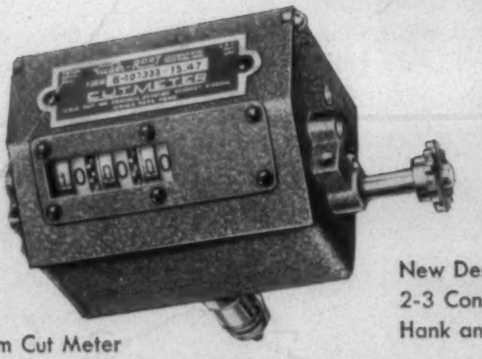


Double-wheel Counter



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